DOCUMENT RESUME

ED 393 192 EA 027 454

AUTHOR Carroll, Stephen; And Others
TITLE Projecting California's Fiscal Future.
INSTITUTION Rand Corp., Santa Monica, CA. Inst. on Education and Training.
SPONS AGENCY Lilly Endowment, Inc., Indianapolis, Ind.
REPORT NO ISBN-0-8330-2364-0; MR-570-LE
PUB DATE 95
NOTE 110p.
AVAILABLE FROM Distribution Services, RAND, 1700 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138; Internet: order@rand.org.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Budgets; *Educational Economics; *Educational Finance; Elementary Secondary Education; *Expenditures; Futures (of Society); Higher Education; Income; Public Schools; *Resource Allocation; School Funds; *State Aid
IDENTIFIERS *California

ABSTRACT

This paper presents findings of a study that analyzed the trends that will shape the California budget over the next decade. The study assumed that current demographic and economic trends, tax policies, and mandated spending programs will continue through the next decade, and projects their implications for state general-fund revenues and spending through 2005. Three trends appear likely to dominate the state's long-term fiscal condition: (1) state revenues will grow moderately; (2) "receiver populations" (the elderly, school-age children, and others who depend on state aid) will grow at least as fast as revenues; and (3) corrections costs will skyrocket. These trends will result in a growing squeeze on public services and battle among constituencies for scarce funds. If current laws and policies do not change, the best estimates for 2005 place health and welfare spending at 32 percent, corrections at 20 percent, and K-14 education at 39 percent of the state budget. The 20 percent that was available for higher education and all other government functions will be cut by more than half. The state will be hard-pressed to increase per-pupil spending in K-12 education fast enough to keep pace with inflation and may very well fall behind the rest of the nation. If current trends persist to 2005, the University of California and the California State University systems will have to turn away more than 135,000 full-time-equivalent (FTE) students while the state's community colleges will turn away another 180,000 FTE, degree-credit students. California's long-term budget constraints may be limiting its future economic growth by limiting its investments in education. Forty-four tables and 24 figures are included. Appendices contain 13 additional tables, sensitivity to revenue and expense assumptions, and modeling K-12 expenditures. (Contains 16 references.) (LMI)

EA

ED 393 192

RAND

Projecting California's Fiscal Future

Stephen Carroll, Eugene Bryton,
C. Peter Rydell, Michael A. Shires

Institute on Education and Training

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

- ☑ This document has been reproduced as received from the person or organization originating it.
- ☐ Minor changes have been made to improve reproduction quality.
- • Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

E. D. Gill

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EA 027 454

BEST COPY AVAILABLE

This research described in this report was supported by a grant from the Lilly Endowment Inc.

ISBN: 0-8330-2364-0

© Copyright 1995 RAND

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from RAND.

RAND is a nonprofit institution that helps improve public policy through research and analysis. RAND's publications do not necessarily reflect the opinions or policies of its research sponsors.

Published 1995 by RAND
1700 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138
RAND URL: http://www.rand.org/
To order RAND documents or to obtain additional information, contact Distribution Services: Telephone: (310) 451-7002; Fax: (310) 451-6915; Internet: order@rand.org

RAND

Projecting California's Fiscal Future

Stephen Carroll, Eugene Bryton,
C. Peter Rydell, Michael A. Shires

Supported by the
Lilly Endowment Inc.

Institute on Education and Training

Preface

This report projects California's fiscal future over the coming decade. We assume that current demographic and economic trends, tax policies, and mandated spending programs will continue through the next decade, and we project their implications for state General-Fund revenues and spending through 2005. We do not attempt to forecast the business cycle and consequent variations around the long-term trends. Nor do we address the effects of proposed federal or state policy changes on the trends. In sum, we do not try to forecast what the state's fiscal condition will actually be in any future year. Rather, our objective is to determine whether the state's current fiscal policies and programs are consistent with the constellation of forces that will bear on the state's long-term fiscal future.

The study is designed to help decisionmakers assess the long-term implications of current policies and programs. The report should be of interest to policymakers concerned for the state's overall long-term fiscal future and to policymakers interested in the viability of specific policies and programs.

Contents

Preface iii

Figures vii

Tables ix

Summary xiii

Acknowledgments xv

1. AN OVERVIEW OF CALIFORNIA'S FISCAL FUTURE 1
   - Current and Future Demands on the State Budget 1
   - Implications for the State's Fiscal Future 8
   - Summing Up 12
   - Organization of the Report 12

2. CALIFORNIA'S GENERAL FUND REVENUE: CONTEXT AND PROJECTIONS 14
   - The General Fund in the Total State Spending Context 14
     - California State and Local Revenues 15
     - California State and Local Spending 16
     - What Percent of Total Spending Comes from the General Fund? 16
   - Projecting General-Fund Revenues 18
     - Historical Trends in General-Fund Revenue 18
     - Personal Income Projections 18
     - Personal Income Tax Projections 28
     - State Sales Tax Projections 29
     - Bank and Corporation Tax Projections 31
     - Other General-Fund Revenue Projections 32
     - Transfers from Special Funds to General Fund 33
   - General-Fund Revenue Projection Summary 33

3. PROJECTING HEALTH AND WELFARE EXPENDITURES 37
   - Patterns in Total Health and Welfare Spending (1992–1993) 37
   - Historical Trends 39
   - Projection of Health and Welfare Expenditures 43
   - Summary of Projections 47

4. PROJECTING CORRECTIONS EXPENDITURES 53
   - The Three-Strikes Law 54
   - Historical Trends 54
   - Projecting Corrections Costs 55
     - Prison Costs 55
     - Youth Authority Costs 57
   - Summary of Projections 57

5. PROJECTING K–14 EDUCATION EXPENDITURES 60
   - Historical Trends 60

Projecting K–14 Expenditures Under Propositions 98 and 111 62
Summary of Real Expenditures per Student 67

Appendix
A. SENSITIVITY TO REVENUE AND EXPENSE ASSUMPTIONS 71
B. MODELING K–14 EXPENDITURES 82

References 95

Figures

1.1. General-Fund Revenues Will Grow Moderately 3
1.2. Three Spending Categories Consume 80 Percent of General Fund (FY94) 4
1.3. Population on Assistance Remains High Despite Economic Recovery 5
1.4. State Revenues and Health and Welfare Spending Grow at Similar Rate 6
1.5. Spending on Corrections Will Grow Much Faster than Revenues 6
1.6. Expenditures for K–14 Education Will Rise as Fast as State Revenues 7
1.7. Access Deficits Will Soar for State's Public Higher Education 9
1.8. California Spends Less than National Average Per Pupil (K–12) 11
2.1. General-Fund Revenues Will Grow Moderately 14
2.2. Flows of Total State Revenues: California, FY93 15
2.3. California Personal Income (Billions of 1994 Dollars): Actual and Projected Using Demographic Factors 24
2.4. Components of Growth for California Personal Income 25
3.1. State General-Fund Revenues and Health/Welfare Spending Grow at Similar Rate 37
3.2. Health and Welfare Expenditures: California, 1992–1993 38
3.3. Assistance Versus Unemployment: California, July 1983 to August 1994 39
3.4. Real Per-Capita Expenditures on Health and Welfare. 51
3.5. Real Per-Capita General-Fund Expenditures on Health and Welfare 51
3.6. General-Fund Expenditure on Health and Welfare as Percent of General-Fund Revenue 52
4.1. Spending on Corrections Will Grow Much Faster than Revenues 53
4.2. Corrections Cost as Percent of General-Fund Revenue: 1970–2005 59
5.1. Expenditures for K–14 Education Will Rise as Fast as State Revenues 60
5.2. Real Per Capita Property Taxes, 1970–2005 61
A.1. Percent of General-Fund Revenue Available for Higher Education and Other Government Expenditures 71
A.2. General-Fund Expenditures on K–14, Health and Welfare, and Corrections as Percent of General-Fund Revenue, 1994–2005 79

Tables

1.1. How the Spending Distribution Changed over the Past 25 Years 4
1.2. By FY05, Cupboard Is Bare for Rest of Government 8
2.1. Public Services Revenues and Expenditures: State Versus Local Operations, California, Fiscal 1993 17
2.2. General-Fund Revenue, California 1970–1994 19
2.3. Sources of General Fund Revenue Real 1994 Dollars Per Capita, California, 1970–1994 20
2.4. Personal Income, California, 1970–1994 22
2.5. Data for Calculating Age-Specific Income Distribution Factors, California, 1989 23
2.6. Household Income by Age of the Head of Household, Age Group Mean as a Ratio to the Overall Mean 23
2.7. Average Annual Projected Growth in Real Personal Income Using Income Distribution Data from Selected Years and Sources 24
2.8. Percent Annual Growth in Real Personal Income Due to Demographic Factors, California 1994–2005 25
2.9. Projected Percent Annual Growth in Real Personal Income Due to Factors Other than Demographic Change, California 1994–2005 26
2.10. Projected Percent Annual Real Growth of Personal Income California, 1994–2005 26
2.11. Personal Income Projections Based on Three Relative Income Growth Scenarios (Billions of Dollars) 27
2.12. Assumptions Used for the Projection of Personal Income Tax. 30
2.13. Projected Personal Income Tax Revenue 30
2.14. Projected Sales Tax Revenue 31
2.15. Projected Bank and Corporate Tax Revenue 32
2.16. Projected Other General-Fund Revenue 32
2.17. Projected Transfers from Special Funds to General Funds 33
2.18. Baseline General-Fund Revenue Projections, California, 1994–2005 34
2.19. Projected Total General-Fund Revenue 34
2.20. Price, Population, and General-Fund Trends, California, 1970–2005 35
3.1. Health and Welfare Expenditures, California, 1989–1994 40
3.2. General-Fund Expenditures for Health and Welfare, California, 1981–1984 41
3.3. Health and Welfare Expenditures, Real 1994 $ Per Capita, California, 1981–1994 42
3.4. Population by Age Groups, California, 1994–2005 43
3.5. Medical Assistance Program, California, 1994–2005 44
3.6. Aid to Families with Dependent Children, California, 1994–2005 45

3.7. SSI/SSP Program, California, 1994–2005 46
3.8. Other Health and Welfare, California, 1994–2005 47
3.9. Health and Welfare Expenditures, California, 1994–2005 48
3.10. General-Fund Expenditures for Health and Welfare, California, 1994–2005 49
3.11. Health and Welfare Expenditures, Real 1994 $ Per Capita, California, 1994–2005 50
4.1. Corrections Cost, California, 1970–1994 56
4.2. Costs of Adult Corrections with the Three-Strikes Law 57
4.3. Cost of Youth Corrections 58
4.4. Corrections Expenditures, California, 1994–2005 58
5.1. Property Tax Revenue, California, 1970–1994 63
5.2. Total Expenditure on K–14 Education by Funding Source, California, 1970–1994 64
5.3. General-Fund Expenditures on K–14 Education, California, 1970–1954 65
5.4. General-Fund Expenditures on K–14 Education Under Proposition 98/111, California, 1994–2005 66
5.5. Alternative Estimates of General-Fund Expenditures on K–14 Education Under Proposition 98/111, California, 1994–2005 66
5.6. Total Expenditure on K–12 Education Under Proposition 98/111 by Source of Funding, California, 1994–2005 . . 68
5.7. Total Expenditure or Community College Education Under Proposition 98/111 by Source of Funding, California, 1994–2005 69
A.1. Total General-Fund Revenue and General-Fund Expenditures on K–14 Education, Health and Welfare, and Corrections, 1994–2005 (Case: High Revenue) 74
A.2. Total General-Fund Revenue and General-Fund Expenditures on K–14 Education, Health and Welfare, and Corrections, 1994–2005 (Case: Baseline Projection) 75
A.3. Total General-Fund Revenue and General-Fund Expenditures on K–14 Education, Health and Welfare, and Corrections, 1994–2005 (Case: Low Revenue) 76
A.4. Total General-Fund Revenue and General-Fund Expenditures on K–14 Education, Health and Welfare, and Corrections, 1994–2005 (Case: Baseline Revenue, 1989-Level K–14 Expenditures) 77
A.5. Total General-Fund Revenue and General-Fund Expenditures on K–14 Education, Health and Welfare, and Corrections, 1994–2005 (Case: Low Revenue, 1989 Support for K–14) 78
A.6. Total K–14 Students (Full-Time Equivalents), California, 1989–2005 80
A.7. Total Expenditure on K–14 Education at 1989 Spending per Student By Source of Funding, California, 1994–2005 81
B.1. Property Tax Revenue, California, 1994–2005 90
B.2. Inputs into Proposition 98/111 Model 91
B.3. General-Fund Expenditure on K–14 Education Under Proposition 98/111 92
B.4. Total Expenditure on K–14 Education Under Proposition 98/111 by Source of Funding, California, 1994–2005 93

B.5. Total Expenditures on K–14 Education Under Proposition 98/111, California, 1994–2005 94
B.6. General-Fund Expenditures on K–14 Education Under Proposition 98/111, California, 1994–2005 94

Summary

What do California's well-publicized fiscal problems actually mean? Are they merely transitory effects of a recession or signs of a bleak new era for the "Golden State"? To help answer that question, we analyzed the trends that will shape the California budget over the next several years.

Specifically, we assume that current demographic and economic trends, tax policies, and mandated spending programs will continue through the next decade, and we project their implications for state General-Fund revenues and spending through 2005. We do not address the problems of balancing the budget in any given year. Rather, our objective is to determine whether the state's current fiscal policies and programs are consistent with the constellation of forces that will bear on the state's fiscal future.

Three trends appear likely to dominate the state's long-term fiscal condition:

- State revenues will grow—but only moderately—in the foreseeable future.
- "Receiver populations" (the elderly, school-age children, and others who tend to depend on state aid) will grow at least as fast as revenues.
- Corrections costs, primarily the costs of building and operating state prisons, driven by "three strikes" legislation, will skyrocket.[1]

These trends have unsettling implications: Because the demands that mandated programs make on the budget will grow considerably faster than revenues, these programs will consume an increasing share of the budget. There will be a growing squeeze on public services. The resulting pinch will be especially painful because the battle for funds will be fought over the relatively small portion of state spending that remains open to change.

In FY94, three major spending categories—health and welfare, corrections, and K–14 education—accounted for 80 percent of the General Fund. Roughly 10 percent of the General Fund went to higher education, primarily the University of California and the California State University systems. State spending for all other purposes, including all three branches of government, accounted for

[1]California's three-strikes law mandates 25 years to life in prison for anyone convicted of a felony following two prior convictions for serious crimes.

another 10 percent of the total. If current laws and policies do not change, our best estimates for 2005 place health and welfare spending at 32 percent, corrections at 20 percent, and K–14 education at 39 percent—for a total of 91 percent of the state's budget. The 20 percent of the budget that was available for higher education and all other government functions will be cut by more than half.

The implications for education are particularly troublesome. If we expect high technology to fuel economic growth, California needs a strong education system. But California has lagged behind most other states in K–12 funding per pupil for well over a decade and now provides fewer dollars in absolute terms to higher education than it did in 1988. Our analysis implies that the state will be hard-pressed to increase per-pupil spending in K–12 education fast enough to keep pace with inflation. If, as is likely, other states increase real spending per pupil in the future, California will likely fall further behind the rest of the nation. Similarly, if current trends persist to 2005, the University of California and the California State University systems will have to turn away more than 135,000 full-time-equivalent students while California's community colleges will turn away another 180,000 full-time-equivalent, degree-credit students. California's long-term budget constraints may be limiting its future economic growth by limiting its investments in education.

Acknowledgments

We have received assistance and advice from staff members of several state agencies, including the Department of Education, the Department of Finance, and the Office of the Legislative Analyst. We are particularly grateful to the Demographic Research Unit in the Department of Finance and to Carol Bingham, Bob Loessberg-Zahl, and Brad Williams at the Office of the Legislative Analyst for helping us understand the fiscal implications of numerous state programs.

Several RAND colleagues contributed to the development and implementation of this analysis. We are particularly indebted to Dominic Brewer, Cathy Krop, Kevin McCarthy, and Peter Stan for their valuable comments on earlier drafts of this report; to Joyce Peterson for overseeing the organization and final preparation of this report; to Betty Amo for her editorial assistance; and to Tracy Jenkins, who prepared the figures and tables as well as the final text.

The work reported here was supported by RAND's Institute on Education and Training (IET) with funds provided by a grant from the Lilly Endowment to the IET. We are particularly indebted to Roger Benjamin, the IET's director, for his support and intellectual leadership throughout the course of the effort. We also thank the Public Policy Institute of California (PPIC) for supporting Michael A. Shires' continued participation in the study after he joined the PPIC.

While we recognize the contributions of the many people who made this report possible, we emphasize that the discussion and findings in this report reflect only the views of the authors.

1. An Overview of California's Fiscal Future

California has encountered severe fiscal problems for the past five years. With the economy mired in a deep recession, state General-Fund revenues were virtually flat between 1990 and 1995 while demands for state support continued to grow. The result has been a series of budget deficits and cuts in state support for a wide variety of activities.

The state economy is beginning to improve and General-Fund revenues will likely grow as the economy expands. But a combination of demographic changes and spending mandates implies that demands for state support will also grow, possibly faster than revenues will. And if spending demands do grow faster than revenues, the state's fiscal problems may continue, despite the improved economy. To help decisionmakers assess the state's fiscal future, we examined the trends that will shape the California budget over the next several years.

Our objective is to assess the long-term implications of current policies and programs. Specifically, we assume that current demographic and economic trends, tax policies, and mandated spending programs will continue through the next decade, and we project their implications for state General-Fund revenues and spending through 2005. We do not attempt to forecast the business cycle and consequent variations around the long-term trends. Nor do we address the effects of proposed federal or state policy changes on the trends. In sum, we do not try to forecast what the state's fiscal condition will actually be in any future year. Rather, our objective is to determine whether the state's current fiscal policies and programs are consistent with the constellation of forces that will bear on the state's long-term fiscal future.

This chapter provides an overview of the results of our projections and their implications for California's fiscal future. Subsequent chapters provide detailed discussions of the methods we used to arrive at the results presented below.

Current and Future Demands on the State Budget

We focus on California's General Fund because it contains the funds open to state control. The General Fund—about $42 billion this year—is the money the governor and the legislature can debate about, allocate among various activities,

and generally control to some degree. The other types of state spending are essentially *not* under state control. Almost $30 billion of total state spending is, in fact, federal spending, such as Title I aid to education, which the state simply passes on to local governments without influence. Another $14 billion consists of special funds. These funds are revenues restricted by law for particular functions or activities of government, such as motor vehicle revenues earmarked for highway construction and maintenance. Because the revenues paid into a Special Fund may be used only for the purposes specified in the legislation establishing that fund, the General Fund is effectively the state budget.

General-Fund revenues grew rapidly through the 1970s and 1980s, largely because rapid growth in personal incomes resulted in even more rapid growth in state income taxes and sales taxes. These two revenue sources now account for just under 80 percent of General-Fund revenues, up from about 60 percent in the early 1970s. But much of that growth in personal income was driven by favorable demographic trends that are not likely to continue as forcefully into the future. The fraction of the state's population in the prime working ages—and thus the prime earning years—grew rapidly into the mid-1980s, then flattened out. Current demographic projections imply that the percentage of the population in that age group will start to decline in the near future. Accordingly, the rates of growth in personal income and, consequently, state income taxes and sales taxes will likely be significantly lower over the coming decade than they were in the 1970s and 1980s. As Figure 1.1 shows, if revenues from other sources continue to grow in the same proportion to personal incomes as in the past, the General Fund will grow moderately, at best, through the next decade.[1]

State spending in three major areas—health and welfare (H&W), corrections, and K–14 education—is effectively mandated in the sense that factors outside the state's control largely determine what the state must spend in each area. The federal government contributes substantial funding for the major health and welfare programs operated by the state, provided that the state meets various matching requirements. If California spends less than the required amount on one of these programs, it risks losing the federal support for that program. Although the state has been successful in reducing benefit levels in several health and welfare programs over the past decade, federal matching requirements inhibit further reductions. Determinate sentencing and "three-strikes" legislation determine the time a convicted felon must serve in state prison. And a series of state and federal court decisions limits the state's discretion in the treatment of

[1]Our estimates of growth in personal incomes and General-Fund revenues through the end of the decade are very similar to other published estimates. We are not aware of any other attempts to project either personal incomes or General-Fund revenues beyond Fiscal Year 2000.

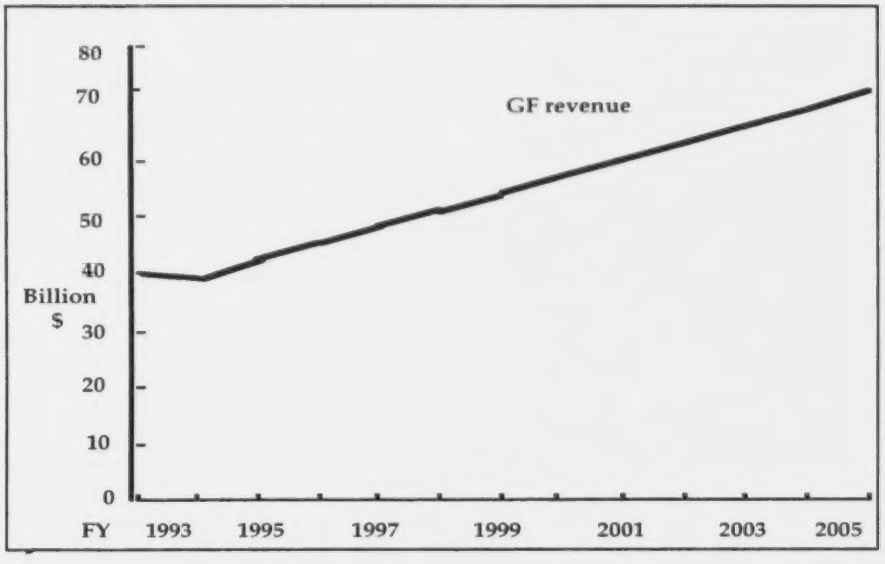

Figure 1.1—General-Fund Revenues Will Grow Moderately

prisoners and, hence, in corrections costs. Propositions 98 and 111 establish spending requirements for K–14 education. The state must make up the difference between the spending requirements and the property tax revenues of local school districts and community colleges. The state can, and has, required cities and counties to turn over some of their property tax revenues to K–14 education, easing its financial obligations to the schools. But the fiscal concerns of cities and counties clearly limit the state's ability to obtain further relief from its Proposition 98/111 obligations.

Last year[2] (Fiscal Year 1994), fully 80 percent of the General Fund was allocated to these three spending categories: Health and welfare accounted for 33 percent, corrections for 8 percent, and K–14 education for 39 percent. State spending for all other purposes, including higher education (primarily the University of California and the California State University systems) and the costs of operating all three branches of government, accounted for only about 20 percent of the total (see Figure 1.2). Table 1.1 shows how spending on these categories has changed over the past 25 years.

The critical question now is how spending in these categories is likely to grow. For health and welfare, the story seems simple: Although benefit levels have been decreasing over the past decade, the size of eligible populations has been

[2]Complete data on General-Fund spending this year (FY95) are not yet available.

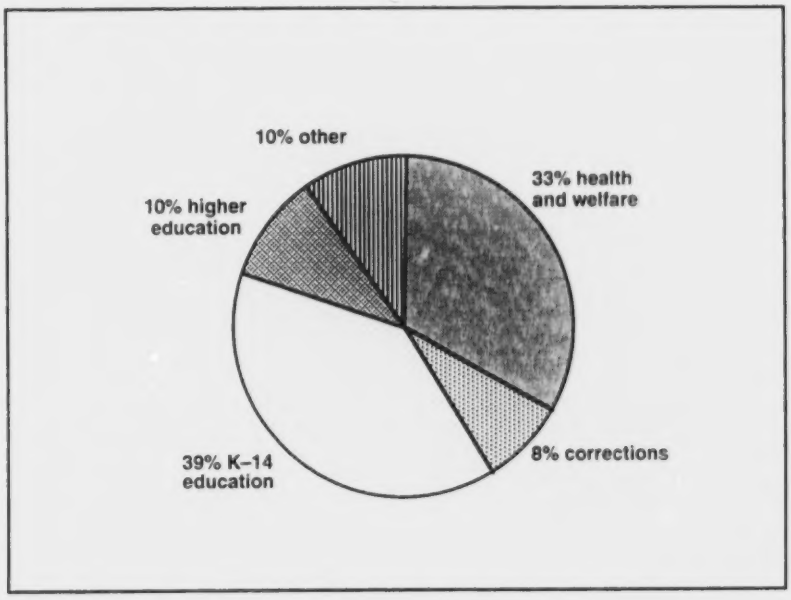

Figure 1.2—Three Spending Categories Consume 80 Percent of General Fund (FY94)

Table 1.1

How the Spending Distribution Changed over the Past 25 Years

	Share of General Fund (%)		
Budget Category	FY 70	FY 81	FY 94
Health and Welfare	30	33	33
Corrections	4	3	8
K–14 Education	37	40	39
Higher Education	14	10	10
Other	15	13	10

increasing. The number of Californians over age 65 will continue to grow sharply, as will other dependent populations. During recessions, when California's overall unemployment rate has increased, participation rates in "means-tested" programs has also grown. However, when unemployment decreased during recoveries, participation rates did not decrease correspondingly (see Figure 1.3). As a result, the increase in beneficiaries has outweighed the effects of reduced benefit levels.

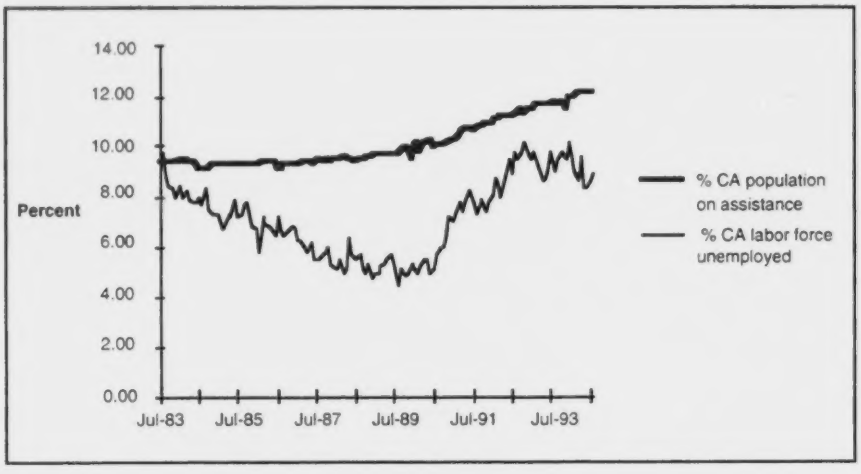

Figure 1.3—Population on Assistance Remains High Despite Economic Recovery

Figure 1.4 shows that, if these trends continue, demands on health and welfare spending are likely to grow at least as fast as state revenues.[3] Because the magnitude of spending in each category differs, we base the comparison on an index, rather than on absolute amounts, to compare spending increases in these categories with increases in General-Fund (GF) revenues. For all categories, 1994 serves as the base year. Thus, an index value of, say, 140 for spending on health and welfare indicates that, in a given year, health and welfare expenditures represent 140 percent of 1994 expenditures.

When determinate sentencing was introduced in the early 1980s, corrections' share of the budget began to grow rapidly—from about 3 percent in the early 1980s to 8 percent in 1994. With the state's new three-strikes legislation[4] and ballot initiative (Proposition 184), that share is likely to increase even more. We estimated the number of prisoners the state will have to accommodate if these laws are enforced as written[5] and the consequent operating and capital costs, assuming the eventual prison-construction bond issues are approved: As shown in Figure 1.5, annual corrections' spending will increase fourfold by FY05, bringing corrections' share of the budget to roughly 20 percent.

---

[3]We are not aware of other projections of General-Fund health and welfare expenditures beyond the coming year.

[4]For a description of the "three-strikes" law, see Chapter 4.

[5]Our estimates of future corrections costs assume that the Three Strikes law is implemented as written. The California Department of Corrections' projections of prison populations through Fiscal Year 1999 are lower than ours. The department does not spell out the assumptions underlying its projections.

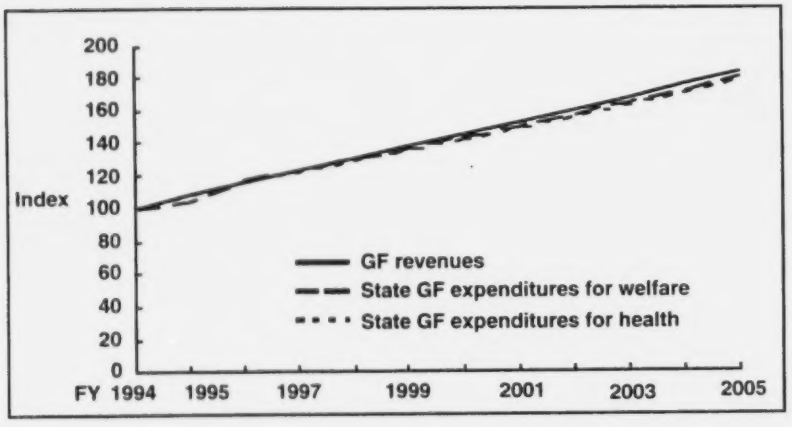

Figure 1.4—State Revenues and Health and Welfare Spending Grow at Similar Rate

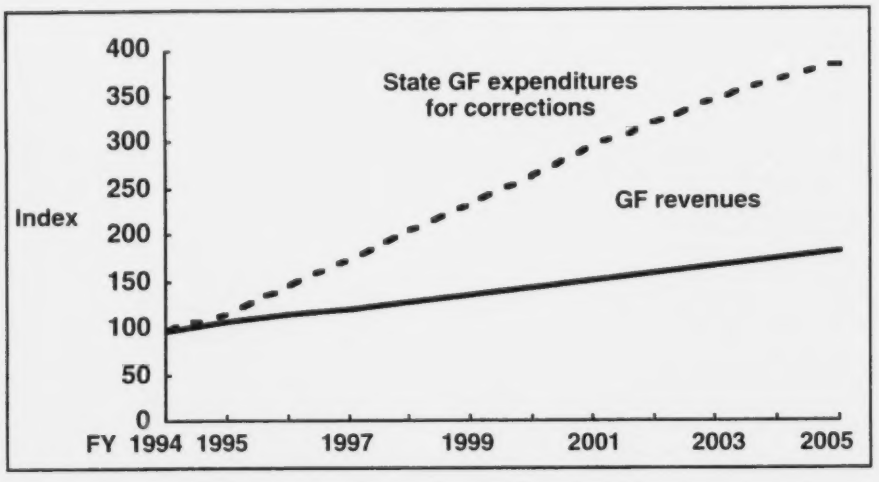

Figure 1.5—Spending on Corrections Will Grow Much Faster than Revenues

We can forecast spending on K–14 education with more certainty than spending on other categories because the state constitution defines a key variable: Taken together, Propositions 98 and 111 define *minimum spending per pupil.* Demographic trends suggest that total enrollment in California public schools will grow by 30 percent over the next decade. This means that, given reasonable expectations for property tax collections, the amount needed to meet the minimum K–14 spending requirement during that time will grow about as fast as

General-Fund revenues and will consume a roughly constant share of the fund (see Figure 1.6).[6]

These projections show that if current policies and programs continue into the future, the state's budgetary picture will become increasingly problematic. Because spending on health and welfare and K–14 education will grow about as fast as will General-Fund revenues, and corrections costs will grow much faster, the share of the budget going to these three areas will grow throughout the next decade, leaving less and less for higher education and all other government activities.

Table 1.2 puts these trends in perspective: If current laws and policies do not change, our best prediction for 2005 places health and welfare spending at 32 percent, corrections at 20 percent, and K–14 education at 39 percent—for a total of 91 percent of the state's budget.[7] If the state is effectively required to spend about 91 percent of its budget on health and welfare, corrections, and K–14 education, the share of the budget available for higher education and all other government functions will be cut in half. How the remaining 9 percent that is left

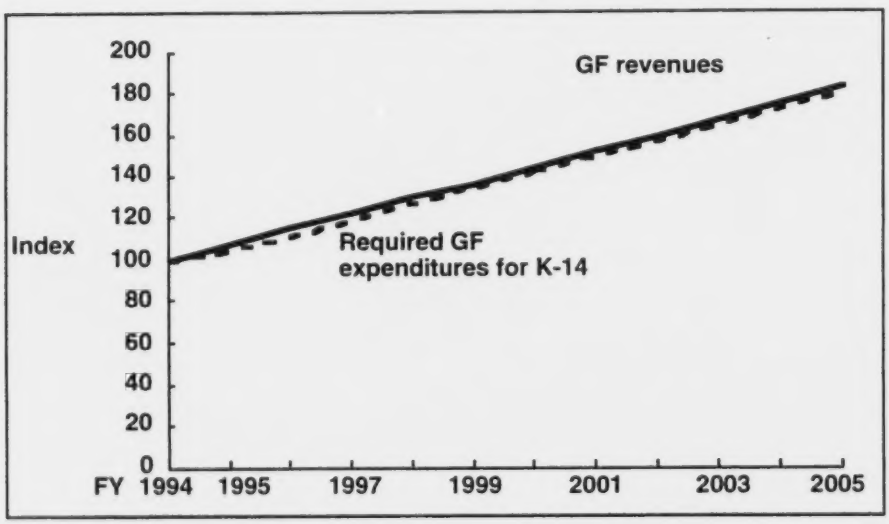

Figure 1.6—Expenditures for K–14 Education Will Rise as Fast as State Revenues

[6]Our estimates of the K–14 expenditures required by Propositions 98 and 111 through the end of the decade are very similar to other published estimates.

[7]Appendix A provides results of analyses to test the sensitivity of these estimates to underlying assumptions.

Table 1.2

By FY05, Cupboard Is Bare for Rest of Government

Budget Category	Share of General Fund (%)			
	FY70	FY81	FY94	FY05
Health and Welfare	30	33	33	32
Corrections	4	3	8	20
K–14 Education	37	40	39	39
Higher Education	14	10	10	?
Other	15	13	10	?

will be divided between these two categories is not clear.[8] But it is clear that current laws and policies, if continued, will dramatically reduce the share of the state's General Fund going to these categories.

Implications for the State's Fiscal Future

Three trends appear likely to dominate the state's long-term fiscal condition:

- General-Fund revenues will grow—but only moderately—in the foreseeable future.
- "Receiver populations" (the elderly, school-age children, and others who tend to depend on state aid) will grow at least as fast as revenues.
- Corrections costs, driven by three-strikes legislation, will skyrocket.

What do these trends mean for the state? Demands for state support are likely to grow faster than revenues will. There will be a growing squeeze on public services. Because the spending for mandated programs will grow considerably faster than revenues, these programs will consume an increasing share of the budget. The resulting pinch will be especially painful because the battle over funds will be fought over the relatively small portion of state spending that remains open to change.

Where does this leave the other activities supported by state government? We considered two scenarios: Under an optimistic (from higher education's perspective) scenario, higher education's share declines to 5 percent, half its current share, over the next decade. This leaves only 4 percent in 2005 for other

[8]The stated goal of the California Master Plan for Higher Education is to provide every Californian who might benefit with access to higher education (California State Department of Education, *A Master Plan for Higher Education in California*, Sacramento, 1960.) But neither the plan nor any subsequent legislation requires the state to allocate the funds necessary to achieve that goal.

demands on the General Fund. Under a pessimistic scenario, we assume that "other" is allocated 6 percent in 2005, leaving only 3 percent for higher education.

In the optimistic scenario described above, the share of the General Fund going to higher education falls half a percentage point per year, to 5 percent in 2005. We assume that the University of California (UC) and the California State University (CSU) divide the higher-education budget as they do today, that the percentage of Californians attempting to enroll in each system remains constant (for every demographic group), and that each system's cost per student remains the same. Given these assumptions, by 2005 the UC and CSU systems would be turning away about 135,000 full-time-equivalent students annually. California's community colleges will turn away another 180,000 full-time-equivalent, degree-credit students each year. In the pessimistic scenario, higher education's share of the budget declines seven-tenths of a percentage point per year, to 3 percent in 2005. In this case, California's public higher education systems will turn away over 400,000 full-time-equivalent, degree-credit students each year (see Figure 1.7).

This is not to say that California's public colleges and universities will, in fact, turn away more than 300,000 students in 2005. Presumably, UC or CSU or the community colleges could become more efficient and lower their costs per student, could save money by reducing quality, and could raise tuition

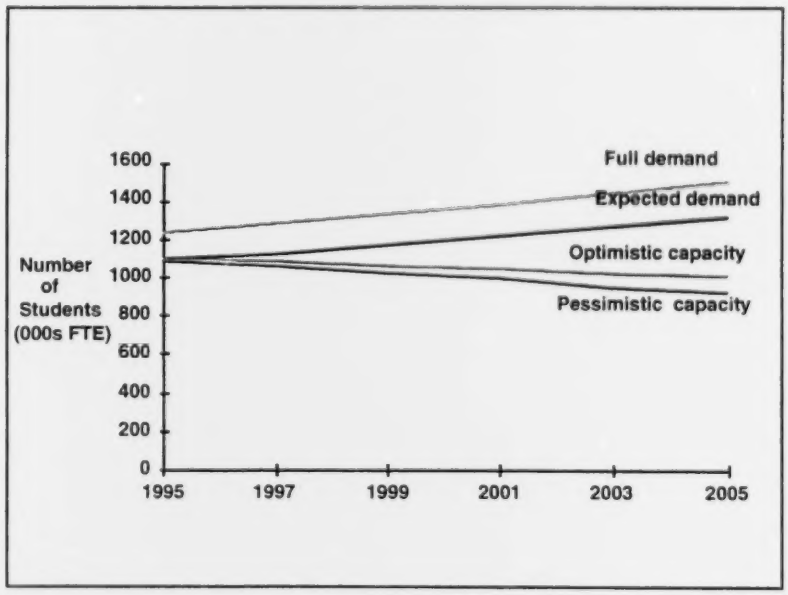

Figure 1.7—Access Deficits Will Soar for State's Public Higher Education

more than they already have. However, our estimates do suggest that emerging constraints on state funding may require massive changes in the state's higher education institutions.

The situation would of course improve with a return of the high growth rates California once took for granted. Most economic analysts, however, think that occurrence is unlikely. Although the recession has ended, moderate growth in state revenues is the likely outlook—not the kind of sky-rocketing increase that could change the broad budget outlook in the long term. In his 1995–96 budget, Governor Wilson proposed a 15 percent income tax cut for individuals and businesses, pointing out that California's relatively high business taxes and marginal tax rates may be impeding economic growth. The literature seems to show that certain taxes, at least at the margin, do cause firms to leave or to avoid the state. Thus, reduced taxes could stimulate economic growth, but there is no certainty about how quickly that stimulus would work and how large its effects would be.

Spending cuts would certainly help, but the big budget categories are hard to control. Key legislative and policy changes would be required, and measures like reducing the prison population or cutting per-pupil spending on public schools would probably face implacable opposition. Making government more efficient is always a popular goal but typically proves difficult to achieve.[9] The proponents of Proposition 187 have argued that its constraints on the provision of public services to illegal immigrants would reduce the state's costs. However, a federal district judge has ruled major portions of the initiative invalid because they conflict with superseding federal laws. While this decision will likely be appealed, the Proposition will probably have little, if any, effect on state spending anytime in the foreseeable future.

Further, attempts to increase efficiency or simply eliminate certain services may not be in the state's long-term interest. For instance, if we expect high technology to fuel economic growth, we need a strong education system, but, as Figure 1.8 indicates, California already spends less per pupil than the national average (in fact, it is among the lowest fifth of states in K–12 spending per pupil). Even if legislators could muster sufficient support to overturn Proposition 98 and cut school spending, would that be wise? Similarly, some would argue that the state may actually be limiting its future economic growth by decreasing the higher-education investments in human capital.

[9]The difficulty is compounded by the fact that most K–14 and health and welfare programs are supported by budget transfers to the school districts and state and local governments.

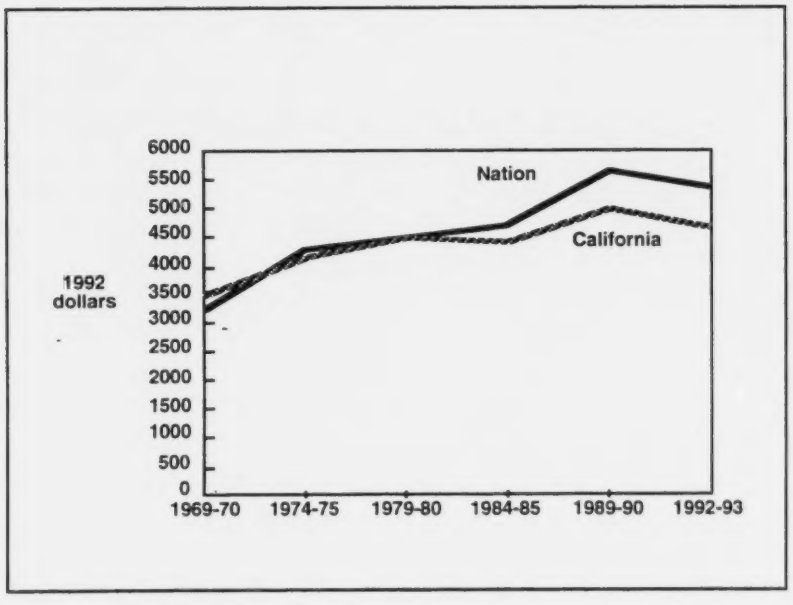

Figure 1.8—California Spends Less than National Average per Pupil (K–12)

Historically, California has been very adept at getting federal support. But the federal budget, like the state's, is increasingly consumed by spending categories that are difficult to reduce. Moreover, recent changes in Washington may change the federal government's relationship with state government in general. If the rhetoric is credible, the federal government may be replacing some of the categorical grants to states with block grants. That would mean fewer mandates for California, but less money as well.

The conventional wisdom views California's fiscal woes in the wake of the national recession of 1990–91 as arising from cutbacks in the aerospace industry and in other defense related activities after the end of the Cold War—a structural change that moves beyond the usual cycle to make up a long-term trend.[10] However, analyses of other states' fiscal conditions suggest that the trends noted here appear to varying degrees elsewhere. That finding, in turn, suggests that while cutbacks in defense spending certainly contributed to California's fiscal problems, other factors are also at work. Accordingly, restructuring the state's economy may not be a sufficient response to California's fiscal problems.

[10]See, for example, California Business–Higher Education Forum (1994) and Jean M. Ross et al. (1995).

For example, the Kentucky Long Term Policy Research Center is examining long-term trends in that state's revenues and expenditures. Their preliminary results are broadly similar to those described above.[11] It appears that if current revenue and spending trends continue in that state, expenditures will increase faster than the state's ability to pay for them. Similarly, we have reviewed revenue and expenditures data and projections for Wisconsin provided by a variety of public and private organizations. We found that if current revenue and spending trends were to continue through 2005, state spending in that year would be 20 percent greater than state revenues.[12] In Gold (1995), researchers examined the fiscal stresses emerging at the state level in the first half of the 1990s. While they noted important differences among the states, they found trends emerging in many of the states that are like those we see in California. In particular, they report that ". . . the fastest growing part of state budgets in the 1980s was corrections spending, which quadrupled in that decade" (p. 11). They also note that explosive growth in Medicaid and other Federal mandates was a major contributor to states' budgetary problems (p. 7).

Summing Up

It seems undeniable that California faces a fundamental and long-term change in the state's finances, not a transitory problem that any likely economic growth or predictable policy changes can address. A small set of essentially mandated demands will soon consume virtually all the state's unrestricted income. Only a few basic options present themselves and none appears attractive. Clearly, a much more careful look at specific solutions is in order. In general, however, policymakers and voters will have to address two kinds of questions: how to achieve consensus on one or more traditionally unpopular solutions and how to identify solutions that, while painful in the short term, will not prove crippling as well. The budget problem is creating a critical moment in the state's history: The stakes are high, the limits are sharp, and the choices are difficult.

Organization of the Report

The sections that follow describe the numbers and methods used in our projection of the trends affecting California's fiscal future.

---

[11]Correspondence with Michael Childress, executive director, The Kentucky Long Term Policy Research Center, Frankfort, Ky.

[12]Unpublished RAND calculations.

- Section 2 provides a general overview of state and local spending in California and presents our projections of General-Fund revenues.
- Sections 3, 4, and 5 present our projections of General-Fund expenditures for health and welfare, corrections, and K–14 education, respectively.
- Appendix A provides results of sensitivity analyses. Appendix B presents details of the model for projecting expenditures on K–14 education.

2. California's General Fund Revenue: Context and Projections

In Section 1, we predicted that California's General-Fund revenues will grow only moderately over the next decade, as shown in Figure 2.1.

This section provides the detail behind that projection. It shows how the General Fund fits into the total state-spending context and explains the methods for projecting General-Fund revenue by major component: that is, personal income tax, sales tax, bank and corporation tax, and other revenue.

The General Fund in the Total State Spending Context

The General Fund is the focus of policy debates over state priorities. It contains the money that the governor and the legislature control to some degree. However, the General Fund accounts for less than a third of *total* government spending in California. To put the General Fund in context, we review total state and local revenues and spending in California in Fiscal 1993, the most recent year for which complete data are available.

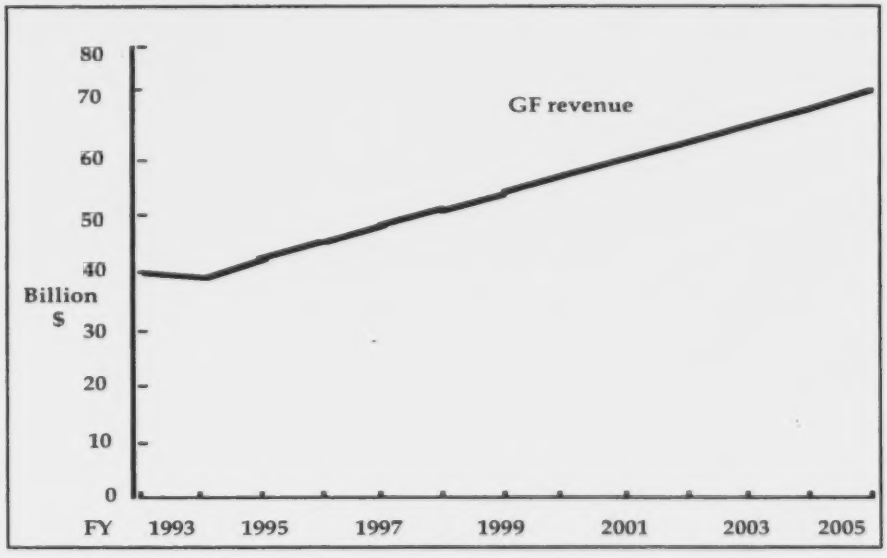

Figure 2.1—General-Fund Revenues Will Grow Moderately

California State and Local Revenues

Figure 2.2 depicts the sources and flows of state and local revenues in that year. Those revenues totaled about $133 billion: $79 billion (almost 60 percent) in state revenues and $55 billion (just over 40 percent) in revenues raised by various local governments, including counties, cities, school districts, and a vast array of special districts.[1]

The major categories of *state* revenues are the General Fund, special funds, and federal funds:

- In 1993, General-Fund revenues totaled just under $41 billion, which came from the following sources: income tax ($17B), state sales tax ($17B), bank and corporate taxes ($5B), and "other" ($2B).
- Special funds totaled $11 billion. Just under $7 billion came from levies related to motor vehicles (license fees, fuel taxes, registration fees). No other single source of special funds contributed more than $1 billion.
- Federal funds totaled $27 billion and were earmarked for such programs as Title I aid to education and Aid to Families with Dependent Children (AFDC).

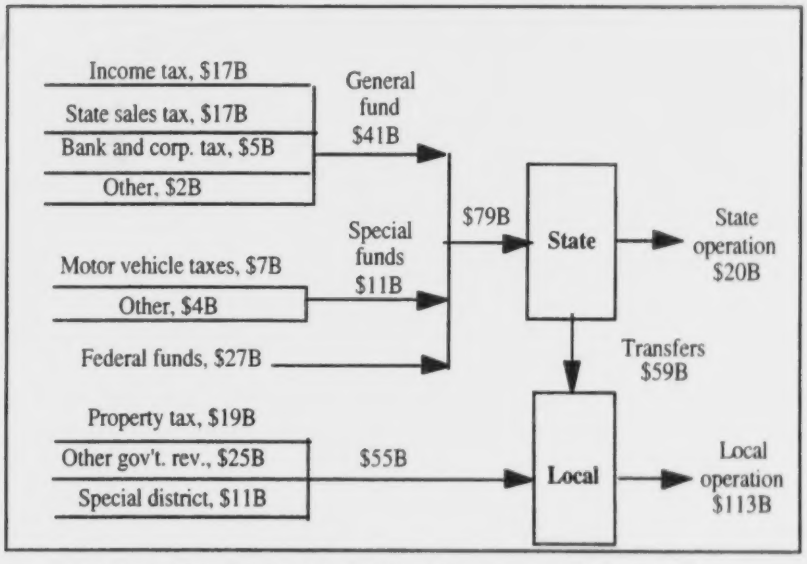

Figure 2.2—Flows of Total State Revenues: California, FY93

[1]Special districts include entities as varied as the Bay Area Rapid Transit District, the Los Angeles International Airport, and mosquito abatement and flood control districts.

The $55 billion in revenues *raised* by *local* governments came from property tax ($19B), other government revenue ($25B), and special district fees/taxes ($11B). However, the state transfers a large share of its revenues ($58B in 1993) to local governments for disbursement. For example, most General-Fund outlays were made through transfers to local governments. In 1993, locally raised revenues combined with the transfers to make $113 billion in revenues available to local governments.

California State and Local Spending

Table 2.1 presents the details of California's state and local spending patterns for the major expenditure categories in Fiscal 1993. As the table shows, *state* agencies spent a total of more than $20 billion on state operations: higher education, K–12 education, health and welfare, corrections, and other government services. The bulk of direct state spending went to higher education ($8B), corrections ($3B), health and welfare ($2B), and "other government services"($7B).[2]

Local agencies spent $113 billion on state and local operations, which included the categories above plus expenditures for special districts. The spending categories supported most by locally raised funds are K–12 education, other government services, and special districts. However, only the latter were totally supported by local funds. As we said earlier, much of the money spent by local agencies comes in the form of transfers from the state. For example, in 1993, all of the money ($34B) local agencies spent on health and welfare came from the state directly ($15B) or from federal funds ($19B) passed through the state. The greatest proportion of these expenditures supports three programs, Medical Assistance, AFDC, and Supplemental Security Income/State Supplementary Payment (SSI/SSP).

What Percent of Total Spending Comes from the General Fund?

As can be extrapolated from Table 2.1, in Fiscal 1993, the General Fund was the primary source of support for K–12 education (59 percent of $28B) and corrections (99 percent of $3B). It provided considerable support for higher education (48 percent of $10B) and health and welfare (36 percent of $36B). It

[2]"Other government services" is a residual category that includes the costs of all three branches of government at the state level, general government, and five cabinet-level departments—(1) State and Consumer Services; (2) Business, Transportation, and Housing; (3) Trade and Commerce; (4) Resources; and (5) Environmental Protection.

Table 2.1

Public Services Revenues and Expenditures: State Versus Local Operations, California, Fiscal 1993 ($ Millions)

Expenditure	Revenues by Source: State — General Fund	State — Special Funds	State — Federal Funds	Local — Property Taxes	Local — Other Gov't Revenue	Local — Special Districts	Total Expense
State Operations							
Higher education	3,571	527	4,035	0	0	0	8,133
K–12 education	572	15	76	0	0	0	663
Health and welfare	537	120	1,278	0	0	0	1,935
Corrections	2,989	2	2	0	0	0	2,993
Other gov't. services	1,933	4,171	612	0	0	0	6,716
Special districts	0	0	0	0	0	0	0
Total	9,602	4,835	6,003	0	0	0	20,440
Local Operations							
Higher education	1,473	2	0	947	0	0	2,422
K-12 education	15,694	14	2,025	6,762	2,490	0	26,985
Health and welfare	12,547	2,573	19,085	0	0	0	34,205
Corrections	44	9	0	0	0	0	53
Other Gov't. services	1,570	3,865	0	7,813	22,635	0	35,883
Special districts	0	0	0	3,115	0	10,621	13,736
Total	31,328	6,463	21,110	18,637	25,125	10,621	113,284
Total Expenditures							
Higher education	5,044	529	4,035	947	0	0	10,355
K–12 education	16,266	29	2,101	6,762	2,490	0	27,648
Health and welfare	13,084	2,693	20,363	0	0	0	36,140
Corrections	3,033	11	2	0	0	0	3,046
Other Gov't. services	3,503	8,036	612	7,813	22,635	0	42,599
Special districts	0	0	0	3,115	0	10,621	13,736
Total revenues	40,930	11,298	27,113	18,637	25,125	10,621	133,724

SOURCES: *Governor's Budget Summary 1994-95*, California's fiscal history, city and county data, special district data, and the voucher report.

Notes:

1. State operations and local operations (local assistance) from the Governor's budget , 1994–1995 for general, special, and federal funds.
2. Property taxes allocated to education, local government, and special districts with fiscal history data. Community colleges allocation from Fiscal Profiles: 1992, California Postsecondary Commission, Report 92-9, 1992.
3. Local revenue is county and city revenues less property taxes and intergovernmental transfers reported in the revenue accounts (not all federal funds are recognized in the county and city accounts).
4. Special district revenue includes nonenterprise and enterprise revenues. Property taxes received by special districts are then subtracted because they are reported separately here.
5. "Other government services" include legislative, judicial, executive, public safety, transportation, utilities, and other services.
6. "Special districts" include airports, harbors, transit, and other services, but do not include schools.
7. Other local government revenue for K–12 includes lottery funds, $560 million, and a variety of special-purpose funds for education, $1,930 million. See *The Effects of the California Voucher Initiative on Public Expenditures for Education*, Santa Monica, Calif.: RAND, MR-364-LE, 1994, p. 63.

BEST COPY AVAILABLE

provided little support for other government services (8 percent of $43B) and none for special districts (0 percent of $14B).

Projecting General-Fund Revenues

Given the General Fund's critical support in major spending categories, what does the future of General-Fund revenues look like? We begin to answer that question by looking at historical revenue trends.

Historical Trends in General-Fund Revenue

As Table 2.2 indicates, *real* (inflation-adjusted) General-Fund revenues increased through most of the 1970s and 1980s.[3] However, they peaked in the late 1980s and have been in a downward trend since then. Because of the recession, real 1993–1994 General-Fund revenue was at the lowest level since 1985–1986. Real *per-capita* General-Fund revenue was at the lowest level since the mid-1970s.

Table 2.3 presents the historical trends in the *sources* of General-Fund revenue (per capita). The largest sources are personal income tax, sales tax, and bank and corporation tax. (In our analysis, General-Fund revenue includes transfers from special funds.) Although personal income tax revenues have grown faster than the other sources since 1970, they have declined with the recent recession. Revenues from all other sources have fallen since their 1979 peak.

Our approach to projecting General-Fund revenues is to use these historical trends as a basis for estimating the amount of revenue that will be generated from each of the sources. We begin by projecting personal income.

Personal Income Projections

The breakdown by source in Table 2.3 suggests how critical personal income estimates are for projecting General-Fund revenue.[4] In 1969, personal income

[3]Throughout this report, quantities are adjusted using deflators provided by the California Department of Industrial Relations, Division of Industrial Relations using data provided by the U.S. Bureau of Labor Statistics. These deflators are based in 1982–1984 and are based on a market basket for all urban consumers in selected California cities. In general, because goods available in one time period may be radically different from those goods in other time periods, deflators are best used in years near the base year. They do, however, retain some value for longer-term comparisons of spending patterns across years. This series was rebased only once during the time period for which the comparison of state spending and resources was made. The year-over-year differences between deflators based in 1967 do not differ significantly from those based in 1982–1984.

[4]Changes in personal income can be analyzed as results of both business cycles and secular trends. By using 25 years of data that include a number of business cycles, we can reasonably

BEST COPY AVAILABLE

Table 2.2

General-Fund Revenue, California, 1970–1994

Fiscal Year	Nominal $ ($ Million)	Real 1994 $ ($ Million)	Real 1994 $ Per Capita
1969–70	4,330	17,583	890
1970–71	4,534	17,751	886
1971–72	5,395	20,447	1,005
1972–73	5,976	21,387	1,039
1973–74	6,978	22,652	1,085
1974–75	8,630	25,391	1,199
1975–76	9,639	26,678	1,239
1976–77	11,381	29,433	1,342
1977–78	13,695	32,724	1,464
1978–79	15,219	32,845	1,438
1979–80	17,985	33,586	1,444
1980–81	19,023	32,027	1,347
1981–82	20,960	33,149	1,365
1982–83	21,233	33,037	1,332
1983–84	23,809	35,297	1,393
1984–85	26,536	37,601	1,456
1985–86	28,072	38,570	1,461
1986–87	32,519	42,917	1,586
1987–88	32,534	41,070	1,482
1988–89	36,953	44,425	1,565
1989–90	38,750	44,169	1,516
1990–91	38,214	41,823	1,395
1991–92	42,026	44,417	1,449
1992–93	40,946	42,175	1,347
1993–94	40,095	40,095	1,257
	Average Annual Growth Rates		
1994/1970	9.7%	3.5%	1.4%
1994/1984	5.3%	1.3%	–1.0%
1984/1974	13.1%	4.5%	2.5%

taxes and sales taxes accounted for just over two-thirds of that revenue; by 1994, they accounted for more than three-fourths. These two taxes are directly related to personal income; the sources in the next two columns are indirectly related because they reflect overall economic activity in the state.

attribute long-term patterns to secular trends. Although year-over-year changes may be more easily attributed to the business cycle, longer-term patterns can be analyzed in terms of secular trends. Whereas our projections account for the completion of the current business cycle, they do not include cyclical variations for years beyond that point.

Table 2.3

Sources of General-Fund Revenue in Real 1994 Dollars Per Capita, California, 1970–1994

Fiscal Year	Personal Income Tax	Sales Tax	Bank and Corporation Tax	Other General-Fund Revenue	Transfers from Special Funds	Total General-Fund Revenue
1969–70	237	361	121	172	1	890
1970–71	247	353	104	172	10	886
1971–72	333	376	123	172	1	1,005
1972–73	328	382	151	178	1	1,039
1973–74	285	416	164	175	45	1,085
1974–75	359	468	174	168	30	1,199
1975–76	397	478	165	171	28	1,239
1976–77	443	505	194	175	26	1,342
1977–78	499	538	223	182	23	1,464
1978–79	450	546	225	187	30	1,438
1979–80	522	524	198	175	25	1,444
1980–81	469	496	193	166	22	1,347
1981–82	488	492	173	144	69	1,365
1982–83	484	479	159	163	47	1,332
1983–84	544	505	189	127	28	1,393
1984–85	593	531	201	129	2	1,456
1985–86	594	531	200	137	–1	1,461
1986–87	679	532	234	132	10	1,586
1987–88	590	530	218	137	8	1,482
1988–89	673	533	218	135	7	1,565
1989–90	661	527	193	116	19	1,516
1990–91	615	486	165	115	15	1,395
1991–92	595	557	155	119	24	1,449
1992–93	567	495	155	107	23	1,347
1993–94	551	436	148	106	15	1,257
			Average Growth Rate			
1994/1970	3.6%	0.8%	0.9%	–2.0%	14.0%	1.4%
1994/1984	0.1%	–1.5%	–2.4%	–1.8%	–5.7%	–1.0%
1984/1974	6.7%	2.0%	1.4%	–3.2%	–4.7%	2.5%

Table 2.4 shows the history of personal income in California since 1969. It has risen considerably in both nominal and real dollars. However, real *per capita* income has risen only about 13 percent. Historically, most of the change in California's personal income has resulted from demographic changes—both

growth in total population and change in the population age mix. Our analysis estimates personal income using projections of these demographic factors.[5]

The shifting age distribution has particularly critical implications for income projections. The fastest growing populations are *not* those in the prime working ages—and thus the prime earning years. The percentage in that age group has been relatively stable over the past decade and, according to projections from the state comptroller's office, will start to decline in the near future. In contrast, the percentage of children and the elderly, especially, will grow.

To take these demographic changes into account, we first determined the relative income and the distribution of households by age group (i.e., head of household's age). We then defined an age-specific income factor by dividing the average household income for each group by the mean for all ages. Table 2.5 gives the results for 1989.

Table 2.6 compares these factors with corresponding factors for the U.S. as a whole. The 1989 California income distribution factors seem reasonable and likely to be relatively stable over time. To project annual-income growth based on demographic changes, we developed an index as follows: For 1989, as an example, we multiply the number of households projected (by the California Department of Finance) to be in each age group by the factor for each age group. Adding the resulting figures gives us the index for 1989. We then repeat the process for 1990 and assume that the average real per-capita income will change by the ratio between the 1989 and 1990 index numbers, and so on for succeeding years.

To test our approach, we "projected" California personal income for past years and compared our projections with actual personal incomes. As Figure 2.3 shows, this approach did a good job of "predicting" what actually happened.

---

[5]The demographic projections used in this report were produced from a specially run statewide summary table of the Department of Finance's June 1993 projections. This run detailed the overall state population by ethnicity, gender, and age. These projections are the only and the most recent series of year-to-year estimates that include ethnicity, gender, and age detail. This model is calibrated against the 1990 Census counts. It assumes fertility rates for Whites and African-Americans to remain flat in the future, while those for Hispanics decline, and Asians and Others increase. Net migration is projected to decrease slowly into the next century. The projected (from the 1993 projection) population in 1994–1995 was 32.52 million people while the actual estimate was 32.14 million people (California Department of Finance, California State and County Population Estimates, 1994, E-2), a variation of just over 1 percent. Further comparisons with more recent aggregate projections show maximum variations of around 1.5 percent, with the series used in this analysis well within the likely error margin of the projections themselves.

BEST COPY AVAILABLE

Table 2.4

Personal Income, California, 1970–1994

Fiscal Year	Nominal $ ($ Million)	Real 1994 $ ($ Million)	Real 1994 $ Per Capita
1969–70	88,500	359,329	18,198
1970–71	94,900	371,588	18,543
1971–72	100,800	382,052	18,777
1972–73	110,200	394,367	19,158
1973–74	121,600	394,769	18,916
1974–75	136,000	400,152	18,898
1975–76	149,300	413,212	19,184
1976–77	167,400	432,939	19,736
1977–78	186,400	445,398	19,926
1978–79	213,900	461,646	20,216
1979–80	244,700	456,977	19,649
1980–81	278,000	468,044	19,681
1981–82	311,700	492,960	20,303
1982–83	332,800	517,815	20,876
1983–84	358,100	530,878	20,954
1984–85	397,300	562,959	21,807
1985–86	431,400	592,720	22,449
1986–87	463,400	611,569	22,607
1987–88	496,500	626,763	22,613
1988–89	533,600	641,496	22,593
1989–90	574,600	654,967	22,475
1990–91	619,400	677,913	22,615
1991–92	631,700	667,632	21,785
1992–93	656,600	676,298	21,607
1993–94	683,000	683,000	21,406
Average Annual Growth Rates			
1994/1970	8.9%	2.7%	0.7%
1994/1984	6.7%	2.6%	0.2%
1984/1974	11.4%	3.0%	1.0%

Another way of testing our approach was to look at what might happen if we used income distribution data from different years and sources. Table 2.7 shows the results. There is little difference from the growth rates that use the California 1989 income distribution. Given the apparent stability of these rates, we projected the percentage of growth in real personal income caused by demographics, keeping the relative income for each group constant and using the population projections provided by the state Department of Finance. The results are shown in Table 2.8.

Table 2.5

Data for Calculating Age-Specific Income Distribution Factors, California, 1989

Age Category	Number of CA Households 1989	Average Household Income ($ thousands)	Income Distribution Factor
Under 25	0.5	28	.58
25–34	2.5	43	.90
34–44	2.5	54	1.15
45–54	1.7	62	1.31
55–64	1.3	53	1.12
65–74	1.2	36	.75
Over 74	0.8	26	.54
All ages	10.3	48	1.00

SOURCE: 1990 Census of Population and Housing, Summary Tape File 3A, August 1992, U.S. Department of Commerce Data Services, CD90-3A-07.

Table 2.6

Household Income by Age of the Head of Household, Age Group Mean as a Ratio to the Overall Mean

	Source of Income Distribution				
Age of Head of Household	California 1989	United States 1975	United States 1980	United States 1986	United States 1991
Under 25	0.58	0.60	0.68	0.59	0.50
25–34	0.90	0.92	0.98	0.95	0.84
34–44	1.15	1.12	1.24	1.22	1.07
45–54	1.31	1.26	1.34	1.34	1.20
55–64	1.12	1.10	1.12	1.10	1.08
65 and over	0.68	0.69	0.60	0.64	0.58

SOURCE: U.S. Bureau of Census, Current Population Reports *Series P-60, Money Income of Households, Families and Persons in the United States*, 1975,1980,1986,1991, U.S. Government Printing Office, Washington, DC., 1976, 1981, 1987, 1992.

But what about all the other elements that might affect income growth—e.g., employment opportunities, mix of industry, and business cycles? Intuitively, they seem important, but the question is, "how important"? To answer that question, we decomposed the annual percent change in personal income into three categories: price inflation, demographic change (per our analysis), and the residual. The residual category contains everything other than the first two. Figure 2.4 gives the results.

Price inflation has the most dramatic effect on change in personal income. In almost every year, change in the residual explained less, usually much less, than did demographic change. The fluctuations in the residual reflect business cycles.

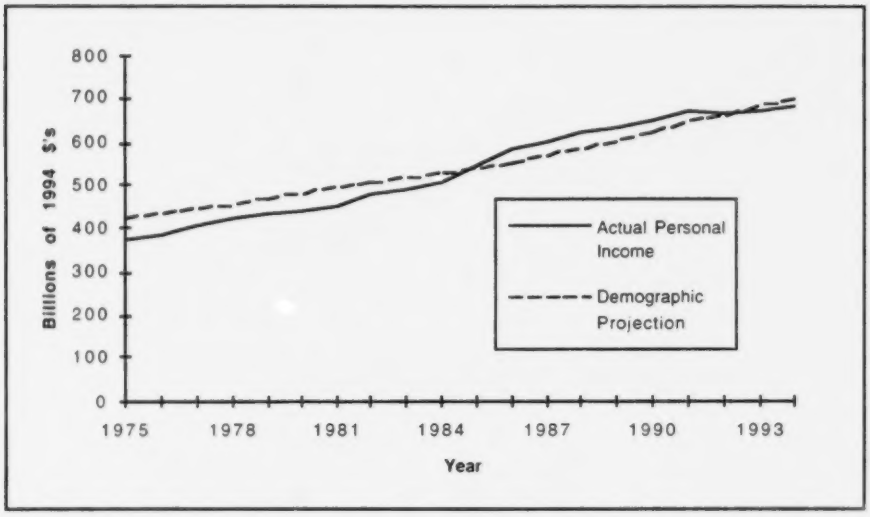

Figure 2.3—California Personal Income (Billions of 1994 Dollars): Actual and Projected Using Demographic Factors

Table 2.7

Average Annual Projected Growth in Real Personal Income Using Income Distribution Data from Selected Years and Sources

Time Period	California 1989	United States 1975	United States 1980	United States 1986	United States 1991
1995–1999	2.4%	2.4%	2.4%	2.4%	2.4%
2000–2005	1.9%	1.9%	1.8%	1.8%	1.9%
1995–2005	2.1%	2.1%	2.1%	2.1%	2.2%

NOTE: All columns use demographic data from California Department of Finance.

However, as the figure shows, despite these fluctuations, the residual has little effect over the long term. These results indicate that demographics has the greatest effect on *real* income growth. Table 2.9 shows the projected annual growth in real personal income due to the residual. We add our estimates of real growth in personal incomes due to demographic change (Table 2.8) to alternative estimates of real growth in personal income due to residual factors (Table 2.9) to obtain projections of the percent of annual real growth in personal income in California (see Table 2.10).

Table 2.8

Percent Annual Growth in Real Personal Income Due to Demographic Factors, California 1994–2005

Fiscal Year	Population Size	Age Distribution	Total Due to Demographic Change
1993–94	1.94	0.49	2.43
1994–95	1.92	0.48	2.41
1995–96	2.06	0.51	2.57
1996–97	2.03	0.67	2.70
1997–98	1.95	0.39	2.34
1998–99	1.91	0.45	2.35
1999–00	1.82	0.37	2.20
2000–01	1.73	0.36	2.09
2001–02	1.68	0.31	1.99
2002–03	1.65	0.20	1.85
2003–04	1.56	0.20	1.75
2004–05	1.53	0.21	1.75

NOTE: Percentage rate for mid-year to mid-year change.

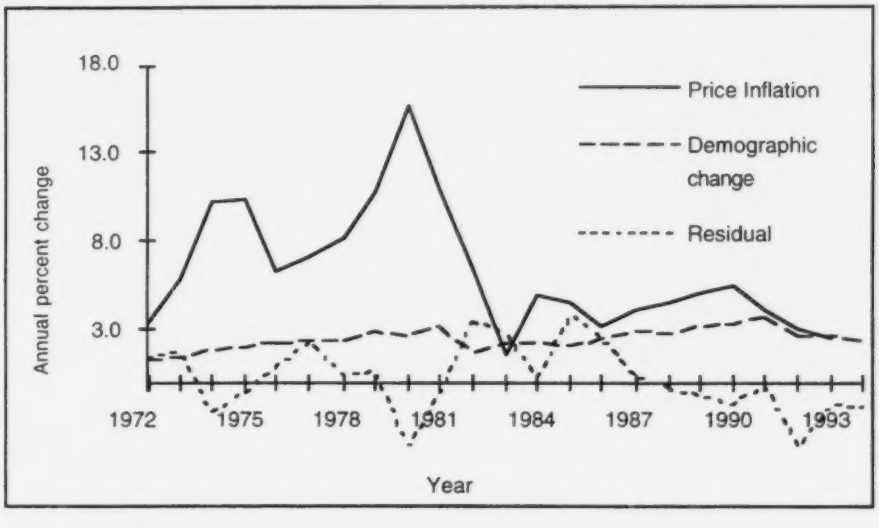

Figure 2.4—Components of Growth for California Personal Income

As Table 2.10 shows, our baseline estimates assume a recovery through 1997, followed by zero average annual growth in real personal income due to the residual. The high-growth path assumes a return to the growth rates of the 1975–1984 decade, about 0.6 percent per year. The low-growth path assumes that the change due to nondemographic factors will remain at the rate of the last 10 years,

Table 2.9

Projected Percent Annual Growth in Real Personal Income Due to Factors Other than Demographic Change, California 1994–2005

Fiscal Year	Low Growth	Baseline Growth	High Growth
1993–94	–1.41	–1.41	–1.41
1994–95	–0.75	–0.75	–0.75
1995–96	–0.50	–0.50	–0.50
1996–97	–0.25	–0.25	–0.25
1997–98	–0.25	0.00	0.00
1998–99	–0.25	0.00	0.30
1999–00	–0.25	0.00	0.60
2000–01	–0.25	0.00	0.60
2001–02	–0.25	0.00	0.60
2002–03	–0.25	0.00	0.60
2003–04	–0.25	0.00	0.60
2004–05	–0.25	0.00	0.60

Table 2.10

Projected Percent Annual Real Growth of Personal Income, California 1994–2005

Fiscal Year	Low Growth	Baseline Growth	High Growth
1993–94	1.02	1.02	1.02
1994–95	1.66	1.66	1.66
1995–96	2.07	2.07	2.07
1996–97	2.45	2.45	2.45
1997–98	2.09	2.34	2.64
1998–99	2.10	2.35	2.65
1999–00	1.95	2.20	2.80
2000–01	1.84	2.09	2.69
2001–02	1.74	1.99	2.59
2002–03	1.60	1.85	2.45
2003–04	1.50	1.75	2.35
2004–05	1.50	1.75	2.35

about –0.25 percent per year. Each of these growth paths assumes a graded recovery from the current recession during the years 1995 through 1997. The estimated growth rates presented in Table 2.10 are computed by combining the growth shown in Table 2.8 with each of the scenarios presented in Table 2.9. For example, in 1998–99, growth due to demographic factors is projected as 2.35 percent; projections for each of the low-, baseline and high-growth scenarios are

–.25 percent, 0, and .30 percent respectively. Total real growth for 1998–99 is 2.10 percent, 2.35 percent, and 2.65 percent for each of the three scenarios.

Table 2.11 adds estimated price inflation of 3 percent per year to the estimated growth rates in Table 2.10 to project growth in nominal personal income. For example, the 1995 baseline growth estimate is derived by multiplying 1994 actual personal income ($683 billion) by the growth rate (1.66 percent) by the assumed inflation rate (3 percent). The calculation would be $683 \times 1.0021 \times 1.03 = 715$.

The Task Force on California Tax Reform and Reduction forecast California personal income through the year 2000.[6] Their estimate for that year was a little over $950 billion, essentially the same as our baseline estimates of $928 billion for FY 2000 and $976 billion for FY 2001. More recently, the State Controller's Office polled a number of public and private California economists.[7] Their forecasts of nominal personal income growth for 1995 averaged 5.2 percent, exactly the same as our estimate for this year. We are not aware of any estimates of personal income in California that extend beyond 2000.

Given these projections of personal income growth, we then modeled revenue from various tax and other sources.

Table 2.11

Personal Income Projections Based on Three Relative Income Growth Scenarios (Billions of Dollars)

Fiscal Year	Low Growth	Baseline Growth	High Growth
1993–94	683	683	683
1994–95	715	715	715
1995–96	752	752	752
1996–97	793	793	793
1997–98	834	836	836
1998–99	877	882	885
1999–00	921	928	937
2000–01	966	976	991
2001–02	1,013	1,026	1,047
2002–03	1,060	1,076	1,105
2003–04	1,108	1,128	1,165
2004–05	1,158	1,182	1,229

[6]See Task Force on California Tax Reform and Reduction, *Building a Better California*, Table 1, p. 15.

[7]See Kathleen Connell, Figure 2, p. 4.

Personal Income Tax Projections

California personal income taxes are highly progressive. To project General-Fund revenues from personal income taxes, we projected the distribution of personal income and applied estimates of effective tax rates by income level to estimate tax revenues. We projected personal income tax revenues by projecting growth rates in personal income tax revenues for 1995 through 2005 and applying them to personal income tax revenues for 1994. The tax projections involved five steps:

- First, we used data on California residents' income tax returns for 1989[8] to estimate effective tax rates on adjusted gross income (AGI) by income level. For example, that year Californians in the $13,000 to 20,000 AGI class had adjusted gross incomes totaling $32.0 billion and paid $0.3 billion in income taxes, a tax rate of 0.9 percent on AGI.
- We then translated effective tax rates on AGI into effective tax rates on family incomes by assuming the distribution of effective tax rates on income tax returns was the same as the distribution of effective tax rates for family incomes. For example, in 1989, 31 percent of Californian income tax returns reported AGI less than $13,000 while 54 percent reported AGI greater than $20,000. That year, 31 percent of California families had personal income less than $25,000 and 54 percent of California families had personal income greater than $34,999.[9] These families had an aggregate income of $45.9 billion. We thus assumed that the effective tax rate on family income in the $25,000 to $35,000 range is 0.6 percent.
- Third, we applied the estimated effective tax rates to the distribution of family incomes for each age category to estimate the total income taxes paid by families with heads of household in each age category. For example, in 1989, 355,402 California families with incomes in the $25,000 to $35,000 range were headed by someone aged 35 to 44.[10] Assuming these families each had incomes at the midpoint of the interval, their aggregate family income was $10.7 billion. Given the estimated effective tax rate of 0.6 percent, they paid $67 million in personal income taxes. We repeated these calculations for all age and income categories and aggregated over the families in each age category to estimate the total personal income taxes paid by the families in

[8]California Statistical Abstract, 1994, Table D-8, pp. 53–54.
[9]U.S. Census, 1990.
[10]U.S. Census, 1990, provides the distribution of family incomes by age of household heads.

that age category in 1989.[11] For example, families headed by someone aged 35 to 45 that year had $121 billion personal income and paid $4.6 billion in personal income taxes.

- Fourth, we used the Department of Finance demographic projections and our estimates of changes in personal income over time described above to estimate personal income tax revenues in each future year. For example, in 1998, we project that the 35 to 44 age group will have an income of $167 billion (1989 dollars). According to these calculations, their group would pay income taxes of $6.4 billion (1989 dollars).
- Fifth, we rescaled the model to 1994 actual tax revenues. That is, we used the parameters we developed on the 1989 tax year to estimate 1994 tax collections and computed the ratio of our estimate to actual tax revenues. We adjusted the parameters by this ratio.
- Finally, we used the adjusted parameters to estimate total income tax collections in each future year. The estimates for 1995 include the surtax on income over $100,000. That surtax is scheduled to be repealed after 1995. Thus, the calculations for 1996 and beyond assume the repeal of that surtax.

Table 2.12 presents the income tax assumptions.

State Sales Tax Projections

In the projection of revenue from this source, state sales tax is that portion of total state sales tax that goes into the General Fund (as opposed to special funds). State sales tax revenue equals personal income times the ratio of taxable sales to personal income times the average sales tax rate. This analysis projects the ratio of taxable sales to personal income by using the average over the five years of 1989–1993, and it projects the sales tax rate by using the 1993 rate.

We used a recent time period for the projected ratio of taxable sales to personal income, because that ratio has been declining during the past 25 years (presumably because a smaller proportion of goods and services purchased by consumers fall into the taxable category). Since 1984, the ratio of taxable sales to personal income has fallen from over 50 percent to about 41 percent. Our *baseline* projections assume that taxable sales will move back up to 45 percent with the recovery. The *low-revenue scenario* assumes they will level off at 42 percent. The

[11] We rescaled the estimates to ensure that they added up to the actual income taxes paid in 1989.

Table 2.12

Assumptions Used for the Projection of Personal Income Tax

Population Age Group	Tax per Individual	Effective Tax Rate
Rates used for 1995 projection		
18–24	75	1.6%
25–34	625	2.8%
35–44	1,390	4.0%
45–54	1,992	4.7%
55–64	1,423	3.8%
65–74	828	3.1%
75+	486	2.4%
Average	700	3.6%
Rates used for 1996 through 2005 projections		
18–24	73	1.6%
25–34	606	2.8%
35–44	1,336	3.8%
45–54	1,904	4.5%
55–64	1,363	3.7%
65–74	796	2.9%
75+	466	2.3%
Average	673	3.5%

NOTE: Rates for 1995 adjusted for 1992–1995 high income surtax. Amounts in 1994 dollars.

Table 2.13

Projected Personal Income Tax Revenue ($ Billions)

Fiscal Year	Low Growth	Baseline Growth	High Growth
1993–94	17.6	17.6	17.6
1994–95	18.6	18.6	18.6
1995–96	19.0	19.0	19.0
1996–97	20.1	20.1	20.1
1997–98	21.2	21.3	21.3
1998–99	22.4	22.5	22.5
1999–00	23.5	23.7	23.9
2000–01	24.7	25.0	25.4
2001–02	26.0	26.3	26.9
2002–03	27.2	27.6	28.4
2003–04	28.5	29.0	29.9
2004–05	29.8	30.4	31.6

high-revenue scenario assumes an increase to 48 percent, the ratio in 1987 before the beginning of the most recent recession. Table 2.14 shows the resulting projections.

For example, the baseline projection for 1995 assumes that taxable sales will be 43 percent of personal income. We project that personal income will be $715 billion; therefore, taxable sales will be $307 billion. The state share of sales tax will remain at 4.8 percent. Total sales tax revenues are projected to be $14.8 billion.

Bank and Corporation Tax Projections

We projected bank and corporation tax by multiplying personal income by the ratio of taxable base to personal income and then multiplying by the average bank and corporation tax rate. The combined ratio of bank and corporation tax to personal income varies with the business cycle. The *baseline* projections use the entire time series of historical data to estimate the average ratio. Cycle-adjusted rates (measured by 10-year averages) have declined slightly since 1970. The *low-revenue scenario* assumes that the ratio will return to only 8.4 percent, the average over the past ten years. The *high-revenue scenario* assumes the ratio will return to 9.5 percent, the average over the previous ten years. In all cases, we phased in changes in the ratios over fiscal years 1994–95 to 1999–2000. Table 2.15 presents the estimates.

For example, in 1994–1995 we assumed that the bank and corporation tax base was 7.5 percent of the personal income tax base. The 1994–1995 estimate of

Table 2.14

Projected Sales Tax Revenue
($ Billions)

Fiscal Year	Low Growth	Baseline Growth	High Growth
1993–94	13.9	13.9	13.9
1994–95	14.4	14.8	14.8
1995–96	15.2	15.9	15.9
1996–97	16.0	17.1	17.1
1997–98	16.8	18.1	18.5
1998–99	17.7	19.0	20.0
1999–00	18.6	20.1	21.6
2000–01	19.5	21.1	22.8
2001–02	20.4	22.2	24.1
2002–03	21.4	23.2	25.5
2003–04	22.3	24.4	26.8
2004–05	23.4	25.5	28.3

personal income was $715 billion; thus the projection for the business tax base is $715 × .075 = $53.6 billion. Applying the 10 percent tax rate, we project business tax revenues of $5.4 billion.

Other General-Fund Revenue Projections

Other General-Fund revenue equals total population times per-capita other General-Fund revenue (see Table 2.16). The projections assume that the historically observed decline in real per-capita other General-Fund revenue will

Table 2.15

Projected Bank and Corporate Tax Revenue
($ Billions)

Fiscal Year	Low Growth	Baseline Growth	High Growth
1993–94	4.7	4.7	4.7
1994–95	5.4	5.4	5.4
1995–96	6.0	6.0	6.0
1996–97	6.3	6.3	6.3
1997–98	7.1	7.1	7.1
1998–99	7.5	7.5	7.5
1999–00	7.8	8.1	8.2
2000–01	8.2	8.5	8.9
2001–02	8.6	9.0	9.9
2002–03	9.0	9.4	10.5
2003–04	9.4	9.9	11.1
2004–05	9.8	10.3	11.7

Table 2.16

Projected Other General-Fund Revenue
($ Billions)

Fiscal Year	Low Growth	Baseline Growth	High Growth
1993–94	3.4	3.4	3.4
1994–95	3.3	3.3	3.3
1995–96	3.3	3.3	3.3
1996–97	3.4	3.4	3.4
1997–98	3.5	3.5	3.5
1998–99	3.5	3.5	3.5
1999–00	3.6	3.6	3.6
2000–01	3.6	3.6	3.6
2001–02	3.7	3.7	3.7
2002–03	3.8	3.8	3.8
2003–04	3.8	3.8	3.8
2004–05	3.9	3.9	3.9

continue through 2000 and then level off. The historical decline is largely due to decreases in alcohol and cigarette taxes. We assume that the rate of growth in each of the scenarios (low, baseline, and high growth) will be constant.

Transfers from Special Funds to General Fund

Over the past 15 years (1980–1994), transfers from special funds to the General Fund have averaged 1.5 percent of General-Fund revenues. Because we have no basis for predicting any future deviation from that past pattern, we assume that this percentage will hold in future years, yielding the projections in Table 2.17.

General-Fund Revenue Projection Summary

We project that General-Fund revenue will be roughly constant in terms of real dollars per capita. Table 2.18 shows the baseline revenue projections by fiscal year in nominal, real, and real per-capita terms. Table 2.19 shows total revenue for the three scenarios: low, baseline, and high. Table 2.20 summarizes the relationships between General-Fund revenue, population, and the price index for the years 1970 through 2005. Our projections indicate that the recent decline in real per-capita General-Fund revenue (a 20 percent decrease from 1987 to 1994) is over. We project a modest (5 percent) increase over the next decade.

Table 2.17

Projected Transfers from Special Funds to General Fund ($ Billions)

Fiscal Year	Transfers
1993–94	0.5
1994–95	0.6
1995–96	0.7
1996–97	0.7
1997–98	0.8
1998–99	0.8
1999–00	0.8
2000–01	0.9
2001–02	0.9
2002–03	1.0
2003–04	1.0
2004–05	1.1

Table 2.18

Baseline General-Fund Revenue Projections, California, 1994–2005

Fiscal Year	Nominal $ ($ Million)	Real 1994 $ ($ Million)	Real 1994 $ Per Capita
1993–94	40,095	40,095	1,257
1994–95	42,628	41,386	1,273
1995–96	44,835	42,261	1,273
1996–97	47,699	43,651	1,289
1997–98	50,645	44,997	1,303
1998–99	53,326	45,999	1,307
1999–00	56,305	47,155	1,316
2000-01	59,143	48,088	1,320
2001-02	62,066	48,996	1,322
2002-03	65,013	49,827	1,323
2003-04	68,038	50,627	1,323
2004-05	71,201	51,437	1,324

NOTE: 1994 through 2010 nominal revenues estimated, assuming a 3 percent per year inflation.

The Task Force on California Tax Reform and Reduction forecast California General-Fund revenues through the year 2000.[12] Their estimate for that year was $53.7 billion—less optimistic than our baseline estimates of $56.3 billion for fiscal year 2000 and $59.1 billion for fiscal year 2001. The California Business–

Table 2.19

Projected Total General-Fund Revenue ($ Billions)

Fiscal Year	Low Growth	Baseline Growth	High Growth
1993–94	40.1	40.1	40.1
1994–95	42.3	42.6	42.6
1995–96	44.1	44.8	44.8
1996–97	46.6	47.7	47.7
1997–98	49.3	50.6	51.0
1998–99	51.8	53.3	54.3
1999–00	54.4	56.3	58.1
2000–01	57.0	59.1	61.6
2001–02	59.6	62.1	65.6
2002–03	62.3	65.0	69.1
2003–04	65.1	68.0	72.7
2004–05	67.9	71.2	76.5

[12]See Task Force on California Tax Reform and Reduction, Figure 2, p. 14.

Table 2.20

Price, Population, and General-Fund Trends, California, 1970–2005

Fiscal Year	Price Index	Population (Millions)	General-Fund Revenue	
			Nominal ($ Millions)	Real Per Capita (1994 $)
1969–70	37.9	19.745	4330	890
1970–71	39.3	20.039	4534	886
1971–72	40.6	20.347	5395	1,005
1972–73	43.0	20.586	5976	1,039
1973–74	47.4	20.870	6978	1,085
1974–75	52.3	21.174	8630	1,199
1975–76	55.6	21.539	9639	1,239
1976–77	59.5	21.936	11,381	1,342
1977–78	64.4	22.352	13,695	1,464
1978–79	71.3	22.836	15,219	1,438
1979–80	82.4	23.257	17,985	1,444
1980–81	91.4	23.782	19,023	1,347
1981–82	97.3	24.280	20,960	1,365
1982–83	98.9	24.804	21,233	1,332
1983–84	103.8	25.336	23,809	1,393
1984–85	108.6	25.816	26,536	1,456
1985–86	112.0	26.403	28,072	1,461
1986–87	116.6	27.052	32,519	1,586
1987–88	121.9	27.717	32,534	1,482
1988–89	128.0	28.393	36,953	1,565
1989–90	135.0	29.142	38,750	1,516
1990–91	140.6	29.976	38,214	1,395
1991–92	145.6	30.646	42,026	1,449
1992–93	149.4	31.300	40,946	1,347
1993–94	153.9	31.906	40,095	1,257
1994–95	158.5	32.520	42,628	1,273
1995–96	163.3	33.189	44,835	1,273
1996–97	168.2	33.864	47,699	1,289
1997–98	173.2	34.524	50,645	1,303
1998–99	178.4	35.183	53,326	1,307
1999–00	183.7	35.824	56,305	1,316
2000–01	189.3	36.444	59,143	1,320
2001–02	194.9	37.056	62,066	1,322
2002–03	200.8	37.666	65,013	1,323
2003–04	206.8	38.252	68,038	1,323
2004–05	213.0	38.838	71,201	1,324

SOURCES: (a) Consumer Price Index (California, all urban consumers): *California Statistical Abstract 1994*, California Department of Finance, Table D-12, 1994 through 2010 estimated assuming 3 percent a year inflation; (b) State population data: California Department of Finance, Demographic Research Unit; (c) General fund revenue: Tables A.1 and A.18.

Higher Education Forum also forecast California General-Fund revenues through FY 2001.[13] Their estimate for that fiscal year was $60.9 billion, slightly more optimistic than our baseline Fiscal Year 2001 estimate: $59.1 billion. We are not aware of any estimates of California General-Fund revenues that extend beyond Fiscal Year 2001.

---

[13]See California Business–Higher Education Forum, Table 3.1, p. 37.

3. Projecting Health and Welfare Expenditures

As shown in Figure 3.1, we project that General-Fund revenues and health and welfare expenditures will grow at about the same rate over the next decade. This section indicates how we arrived at the projection for health and welfare spending. Using 1992–1993 as an example, we first establish how General-Fund expenditures fit into total health and welfare spending.

We then describe the historical trends on which the projections are based and present the details of the projections.

Patterns in Total Health and Welfare Spending (1992–1993)

In 1992–1993, California spent $36.1 billion on health and welfare programs: $20.3 billion from federal funds, $2.7 from special funds, and $13.1 billion (about

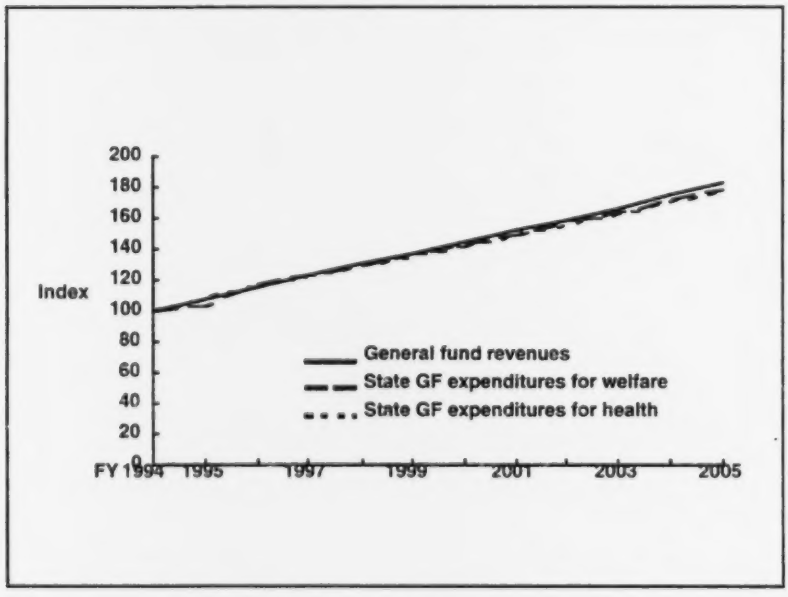

Figure 3.1—State General-Fund Revenues and Health/Welfare Spending Grow at Similar Rate

a third) from the General-Fund. Medi-Cal accounted for two-fifths of the *General-Fund* expenditure on health and welfare, and AFDC and SSI/SSP together accounted for another two-fifths (see Figure 3.2).

Medi-Cal is California's Medicaid program (labeled "medical assistance program" in the state budget). It provides medical assistance to low-income people, and a substantial portion goes to elderly, low-income people to supplement their Medicare assistance. (The federal Medicare program is for elderly people of all incomes, and Medicare payments are not reported in California's budget.) Aid to Families with Dependent Children (AFDC) goes primarily to single-parent households; a small proportion goes to households with two adults who are both unemployed.

Supplemental Security Income (SSI) provides assistance to low-income aged, blind, and disabled individuals. California supplements the federal SSI program with an additional State Supplemental Program (SSP) payment. The Federal SSI payments are not reported in the California state budget, but the state's SSP payments, which come from the General Fund, are.

The general and special-fund expenditures in the "other health and welfare" category are for public health services, mental health and drug treatment services, and other social services. The federal expenditures on other health and welfare are primarily for the Employment Development Office (that is, unemployment insurance).

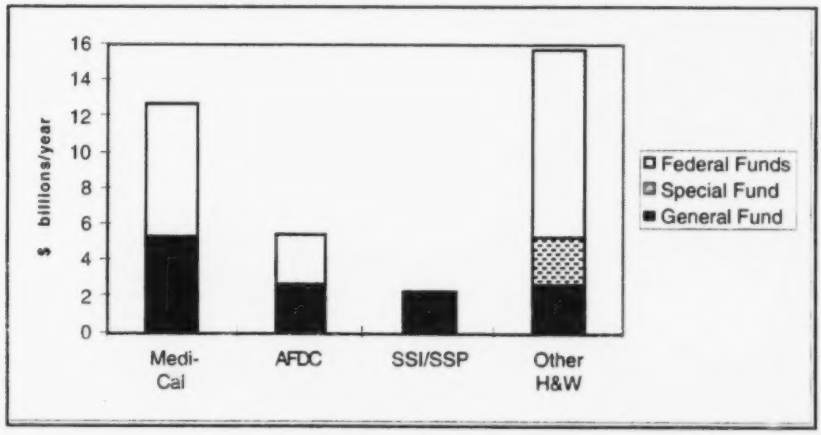

Figure 3.2—Health and Welfare Expenditures: California, 1992–1993

Historical Trends

Real per-capita expenditures[1] on health and welfare—from *all sources* reported in the California state budget—increased by a third (from $882 to $1207 per person in 1994 dollars) during the 1988 to 1994 period. Growth in Medi-Cal expenditures was the major cause of this growth. The current recession also contributed to the more recent increases. However, recovery from the recession will not necessarily reduce budget pressures. Even as unemployment has fluctuated, the percent of California's population receiving assistance (nonoverlapping total of AFDC and SSI/SSP) has steadily increased (see Figure 3.3).

This trend suggests that as California recovers from the current recession, the number of people receiving assistance is unlikely to drop, relative to the general population. In fact, the ratio may well increase. However, we made the conservative assumption that the number of recipients will grow only in proportion to the relevant populations at risk.

In contrast to total health and welfare spending, the real per-capita *General-Fund* expenditure on health and welfare has declined. In 1988, it was $473 per person (1994 dollars). By 1994, it had decreased (by 12 percent) to $416 per person. Medi-Cal is the only health and welfare category for which real per-capita General-Fund expenditures increased during the 1988 to 1994 period. AFDC, SSI/SSP, and other health and welfare categories all decreased.

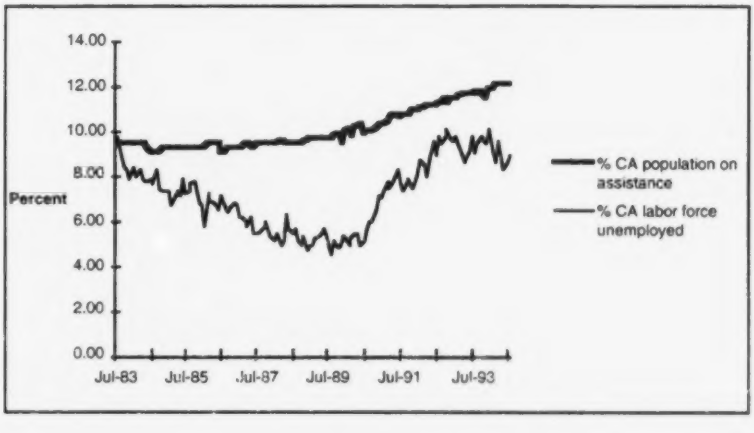

Figure 3.3—Assistance Versus Unemployment: California, July 1983 to August 1994

[1] I.e., expenditures adjusted for price inflation and population increases.

While real per-capita General-Fund expenditures decreased from 1988 to 1994, General-Fund revenues decreased even more. As a result, the *percent* of the General-Fund spent on health and welfare *increased* slightly—from 31.9 percent in 1988 to 33.1 percent in 1994. (See Tables 3.1 through 3.3 for the history of California's expenditures on health and welfare from 1981 through 1994.)

Table 3.1

Health and Welfare Expenditures

California, 1981-1994

Fiscal Year	Nominal ($ Million)	Real 1994 $ ($ Million)	Real 1994 $ Per Capita
1980-81	13,859	23,332	981
1981-82	14,734	23,301	960
1982-83	15,775	24,545	990
1983-84	14,980	22,208	877
1984-85	15,686	22,226	861
1985-86	17,253	23,705	898
1986-87	18,672	24,642	911
1987-88	19,376	24,460	882
1988-89	21,146	25,422	895
1989-90	24,278	27,673	950
1990-91	27,628	30,238	1,009
1991-92	34,287	36,237	1,182
1992-93	36,147	37,232	1,190
1993-94	38,524	38,524	1,207
Ratio 1994/1981	2.8	1.7	1.2

SOURCES: (a) Nominal costs: Governor's Budgets, 1980-1981 to 1993-1994; (b) price and population deflator from Table 2.19.

Table 3.2

General Fund Expenditures for Health and Welfare
California, 1981–1994

Fiscal Year	Nominal ($ million)	Real 1994 $ ($ million)	Real 1994 $ per Capita	% of General Fund
1980-81	7002	11789	496	36.8
1981-82	7373	11660	480	35.2
1982-83	7284	11333	457	34.3
1983-84	7211	10690	422	30.3
1984-85	7546	10692	414	28.4
1985-86	8643	11875	450	30.8
1986-87	9557	12612	466	29.4
1987-88	10379	13102	473	31.9
1988-89	11312	13599	479	30.6
1989-90	12478	14224	488	32.2
1990-91	13377	14641	488	35.0
1991-92	13680	14458	472	32.6
1992-93	13084	13477	431	32.0
1993-94	13282	13282	416	33.1
Ratio 1994/1981	1.9	1.1	0.8	0.9

SOURCES:

(a) Nominal cost: Governor's Budgets 1980–1981 to 1993–1994.

(b) Price, population, and general-fund deflators from Table 2.19.

Table 3.3

**Health and Welfare Expenditures,
Real 1994 $ Per Capita,
California, 1981–1994**

Fiscal Year	Medi-Cal	AFDC	SSI/SSP	Other H&W	H&W Total
Total Expenditure on Health and Welfare					
1980-81	303	178	91	409	981
1981-82	294	183	79	403	960
1982-83	289	182	72	446	988
1983-84	230	182	65	399	876
1984-85	233	181	69	378	861
1985-86	242	192	73	390	897
1986-87	256	197	81	377	910
1987-88	252	193	84	353	882
1988-89	255	197	83	360	895
1989-90	266	204	86	393	949
1990-91	312	212	83	400	1,008
1991-92	444	208	82	449	1,182
1992-93	417	181	76	516	1,190
1993-94	471	176	65	494	1,207
Ratio 1994/1981	1.6	1.0	0.7	1.2	1.2
General-Fund Expenditure on Health and Welfare					
1980-81	172	86	91	147	496
1981-82	164	88	79	148	480
1982-83	161	86	72	139	457
1983-84	114	87	65	156	422
1984-85	110	87	69	149	414
1985-86	119	93	73	164	450
1986-87	125	97	81	164	466
1987-88	127	98	84	165	473
1988-89	125	100	83	171	479
1989-90	130	104	86	168	488
1990-91	146	109	83	150	488
1991-92	199	103	82	87	472
1992-93	177	89	76	89	431
1993-94	174	86	65	91	416
Ratio 1994/1981	1.0	1.0	0.7	0.6	0.8

SOURCES: (a) Governor's Budgets, 1980-1981 to 1993-1994;
(b) price and population deflators from Table 2.19.

Projection of Health and Welfare Expenditures

We projected health and welfare expenditures for each program by (a) identifying the populations that receive benefits from the program and then (b) assuming that the real cost of providing the benefits changes in proportion to those populations. We define population categories by age. In each case, we assume that the population within a category eligible for particular assistance is a constant proportion of the total population in that category.

For Medi-Cal, we recognize three recipient groups: (1) ages 0–20 (primarily people on AFDC), (2) ages 21–65 (low-income workers plus disabled individuals), and (3) ages over 65 (low-income older people). For AFDC, the relevant population group is ages 0–17. For SSI/SSP, the groups are ages 0–65 (disabled persons receiving assistance) and ages over 65 (older people receiving assistance because they are low-income or because they are disabled). Other health and welfare is projected to be proportional to total population.

California is a growing state, and all age groups are expected to increase during the 1994–2005 period, but not evenly. The number of people aged 0 to 20 and the number of people over 65 are expected to increase by 27 percent, while the number of people aged 21 to 65 will increase by only 18 percent. (Table 3.4 reports the population projections. Tables 3.5 through 3.8 give the projections of health and welfare expenditure by type of assistance.)

Table 3.4
Population by Age Groups
California, 1994–2005 ($ Millions)

	Population 0-64						
	Population 0-20						
Fiscal Year	0-17	18-20	Subtotal 0-20	21-64	Subtotal 0-64	65+	Grand Total
1993-94	8.653	1.289	9.942	18.660	28.601	3.305	31.906
1994-95	8.917	1.270	10.187	18.950	29.137	3.383	32.520
1995-96	9.192	1.294	10.485	19.251	29.736	3.453	33.189
1996-97	9.456	1.311	10.767	19.565	30.332	3.532	33.864
1997-98	9.702	1.343	11.045	19.845	30.889	3.635	34.524
1998-99	9.919	1.394	11.314	20.158	31.471	3.712	35.183
1999-00	10.115	1.457	11.572	20.458	32.030	3.795	35.824
2000-01	10.317	1.494	11.811	20.763	32.574	3.870	36.444
2001-02	10.496	1.529	12.024	21.078	33.102	3.953	37.056
2002-03	10.676	1.544	12.220	21.411	33.631	4.035	37.666
2003-04	10.839	1.587	12.425	21.718	34.143	4.110	38.252
2004-05	10.988	1.619	12.607	22.041	34.648	4.190	38.838
Ratio 2005/1994	1.270	1.256	1.268	1.181	1.211	1.268	1.217

SOURCE: California Department of Finance, Demographic Research Unit

Table 3.5

Medical Assistance Program, California, 1994–2005

Fiscal Year	Population Age Group			Total
	Under 21	22-64	65+	
Caseload (Medi-Cal Recipients), Thousands				
1993-94	2,574	1,733	630	4,937
1994-95	2,638	1,760	645	5,042
1995-96	2,715	1,787	658	5,161
1996-97	2,788	1,817	673	5,278
1997-98	2,860	1,843	693	5396
1998-99	2,930	1,872	708	5,509
1999-00	2,996	1,900	723	5,619
2000-01	3,058	1,928	738	5,724
2001-02	3,114	1,957	754	5,824
2002-03	3,164	1,988	769	5,922
2003-04	3,217	2,017	784	6,017
2004-05	3,265	2,047	799	6,110
Total Cost ($ Millions)				
1993-94	3,370	7,596	4,050	15,016
1994-95	3,556	7,945	4,271	15,772
1995-96	3,770	8,314	4,490	16,574
1996-97	3,988	8,703	4,730	17,421
1997-98	4,213	9,092	5,015	18,320
1998-99	4,445	9,513	5,273	19,231
1999-00	4,683	9,944	5,553	20,180
2000-01	4,923	10,395	5,834	21,152
2001-02	5,163	10,869	6,138	22,170
2002-03	5,404	11,372	6,453	23,229
2003-04	5,660	11,881	6,769	24,310
2004-05	5,915	12,420	7,109	25,443
General Fund Cost ($ Millions)				
1993-94	1,245	2,808	1,497	5,550
1994-95	1,315	2,937	1,578	5,830
1995-96	1,394	3,073	1,659	6,126
1996-97	1,474	3,217	1,748	6,439
1997-98	1,557	3,361	1,853	6,771
1998-99	1,643	3,516	1,949	7,108
1999-00	1,731	3,675	2,052	7,459
2000-01	1,820	3,842	2,156	7,818
2001-02	1,908	4,017	2,269	8,194
2002-03	1,997	4,203	2,385	8,586
2003-04	2,092	4,391	2,502	8,985
2004-05	2,186	4,590	2,627	9,404

SOURCES: (a) Medi-Cal recipients 1992-1993: HCFA Medicaid Bureau (1994, p. 96-98); (b) Medi-Cal total costs 1993-1994: Governor's Budget Summary 1995-1996; Medi-Cal cost allocation to age groups: HCFA Medicaid Bureau (1994, p. 102-104).

Table 3.6

Aid to Families with Dependent Children
California, 1994-2005

Fiscal Year	Population 0-17 (millions)	AFDC Recipients (millions)	Total Cost ($ million)	GF Cost ($ million)
1993-94	8.653	2.586	5631	2757
1994-95	8.917	2.665	5977	2927
1995-96	9.192	2.747	6346	3107
1996-97	9.456	2.826	6725	3292
1997-98	9.702	2.900	7106	3479
1998-99	9.919	2.965	7484	3664
1999-00	10.115	3.023	7860	3848
2000-01	10.317	3.084	8258	4043
2001-02	10.496	3.137	8653	4236
2002-03	10.676	3.191	9065	4439
2003-04	10.839	3.239	9479	4641
2004-05	10.988	3.284	9899	4846

SOURCES:

(a) AFDC recipients 1993-94: California Dept. of Social Services (1994).

(b) AFDC total costs 1993-94: Governor's Budget Summary 1995-96

NOTES:

a) AFDC recipients equals population 0-17 times the number of recipients per population 0-17 in 1993-94

b) Total cost equals AFDC recipients times the cost per recipient in 1993-94, inflated by the price index

c) General Fund cost equals total cost times the ratio of GF cost to total cost in 1993-94

Table 3.7

SSI/SSP Program,
California, 1994–2005

Fiscal Year	Population Age 0-64	Population Age 65+	Total
Caseload (SSI/SSP recipients, Thousands)			
1993-94	0.636	0.344	0.980
1994-95	0.648	0.352	1.000
1995-96	0.661	0.359	1.021
1996-97	0.674	0.368	1.042
1997-98	0.687	0.378	1.065
1998-99	0.700	0.386	1.086
1999-00	0.712	0.395	1.107
2000-01	0.724	0.403	1.127
2001-02	0.736	0.412	1.148
2002-03	0.748	0.420	1.168
2003-04	0.759	0.428	1.187
2004-05	0.770	0.436	1.207
General Fund Cost ($ Million)			
1993-94	1,467	616	2,083
1994-95	1539	650	2,189
1995-96	1,618	683	2,301
1996-97	1,700	720	2,419
1997-98	1,783	763	2,546
1998-99	1,871	802	2,673
1999-00	1,961	845	2,806
2000-01	2,055	888	2,942
2001-02	2,150	934	3,084
2002-03	2,250	982	3,232
2003-04	2,353	1,030	3,383
2004-05	2,460	1,081	3,541

SOURCES: (a) SSI/SSP recipients 1993-1994: California Department of Services (1994); (b) SSI/SSP total cost 1993-1994: Governor's Budget Summary 1995-1996; (c) allocation of recipients and cost to age groups: California Statistical Abstract 1994, Table E-16.

NOTES: (a) SSI/SSP recipients equals population times recipients per population in 1993-1994; (b) General-Fund cost equals recipients times cost per recipient in 1993-1994, inflated by the price index (Federal SSI funds are not recorded in the California state budget, so the total cost of SSI/SSP in that budget is the General-Fund cost).

Table 3.8

Other Health and Welfare
California, 1994–2005

Fiscal Year	Total Population (Millions)	Total Cost ($ Million)	GF Cost ($Million)
1993-94	31.906	15,794	2,892
1994-95	32.520	16,581	3,036
1995-96	33.189	1,7430	3,192
1996-97	33.864	18,318	3,354
1997-98	34.524	19,236	3,522
1998-99	35.183	20,190	3,697
1999-00	35.824	21,175	3,878
2000-01	36.444	2,2188	4,063
2001-02	37.056	23,237	4,255
2002-03	37.666	24,328	4,455
2003-04	38.252	25,448	4,660
2004-05	38.838	26,613	4,873

SOURCES: Other H&W cost 1993-1994, Governor's Budget Summary, 1995-1996.
NOTES: (a) Total cost equals population times cost per population in 1993-1994, inflated by the price index; (b) General-Fund cost equals total cost times the ratio of GF cost to total cost in 1993-1994.

Summary of Projections

The general perception is that public expenditures on health and welfare go to the young and the old. Were that the case, these expenditures would be projected to increase faster than the general population over the 1994–2005 period (because both the number of young people and the number of old people are growing faster than the population as a whole). However, a substantial proportion of health and welfare expenditure actually goes to the middle-aged population, which is growing at a slower-than-average rate.

The net effect is that overall real expenditure on health and welfare is expected to grow roughly in proportion to total population, keeping real expenditures per capita at approximately their 1994 levels (see Tables 3.9 and 3.10). Actually there is a small (1 percent) projected increase in the real per-capita expenditure on

Table 3.9

Health and Welfare Expenditures
California, 1994-2005

Fiscal Year	Nominal ($ Millions)	Real 1994 $ ($ Million)	Real 1994 $ Per Capita
1993-94	38,524	38,524	1,207
1994-95	40,520	39,340	1,210
1995-96	42,651	40,202	1,211
1996-97	44,882	41,074	1,213
1997-98	47,208	41,943	1,215
1998-99	49,579	42,767	1,216
1999-00	52,022	43,567	1,216
2000-01	54,540	44,346	1,217
2001-02	57,144	45,110	1,217
2002-03	59,855	45,874	1,218
2003-04	62,621	46,596	1,218
2004-05	65,496	47,316	1,218

SOURCE: Tables 3.5 to 3.8, and 2.20.

health and welfare from the *General Fund*–from $416 to $422 per capita in 1994 dollars. This result comes primarily from an increase in projected AFDC payments: Because AFDC goes to the faster-growing young-age group, its real expenditure is projected to grow from $86 to $90 per capita in 1994 dollars (see Table 3.11). Combining the history tables (3.1 through 3.3) with the projection tables (3.9 through 3.11) shows the long-term patterns in health and welfare expenditures. Three themes stand out:

First, while the total real per-capita expenditure on health and welfare rose substantially in the early 1990s, real per-capita expenditure from the General Fund has been remarkably constant, with some slight historical fluctuations around the average level (see Figure 3.4).

Second, the fluctuations in real per-capita expenditure from the General Fund are a result of changes in the Medi-Cal and other health and welfare categories; AFDC and SSI/SSP are far more stable (see Figure 3.5). The dramatic decline in other health and welfare expenditures in fiscal year 1991–1992 is the result of the administration of a number of health, mental health, and social services programs being transferred from the state to the counties under the State Local

Table 3.10

General Fund Expenditures for Health and Welfare, California, 1994-2005

Fiscal Year	Nominal ($ Millions)	Real 1993 $ ($ Millions)	Real 1993 $ Per Capita	% of General Fund
1993-94	13,282	13,282	416	33.1
1994-95	13,981	13,574	417	32.8
1995-96	14,726	13,880	418	32.8
1996-97	15,505	14,189	419	32.5
1997-98	16,319	14,499	420	32.2
1998-99	17,143	14,787	420	32.1
1999-00	17,991	15,067	421	32.0
2000-01	18,866	15,340	421	31.9
2001-02	19,770	15,607	421	31.9
2002-03	20,711	15,873	421	31.9
2003-04	21,669	16,124	422	31.8
2004-05	22,665	16,374	422	31.8

SOURCE: Tables 3.5 to 3.8, and 2.20.

Realignment Initiative. As a result, General-Fund expenditures in the three program areas were reduced more than $2.0 billion (*Governor's Budget Summary 1992–1993*, p. 74). That reduction translates into $69 per capita in 1994 dollars, which accounts for the drop in other health and welfare expenditures in Figure 3.5.

Finally, California spends approximately a third of its General-Fund revenue on health and welfare programs, and historical deviations from this average exhibit no consistent trend (see Figure 3.6).

Table 3.11

Health and Welfare Expenditures,
Real 1994 $ Per Capita
California, 1994–2005

Fiscal Year	Medi-Cal	AFDC	SSI/SSP	Other H&W	Total H&W
Total Expenditure on Health and Welfare					
1993-94	471	176	65	495	1,207
1994-95	471	178	65	495	1,210
1995-96	471	180	65	495	1,211
1996-97	471	182	65	495	1,213
1997-98	471	183	66	495	1,215
1998-99	472	183	66	495	1,216
1999-00	472	184	66	495	1,216
2000-01	472	184	66	495	1,217
2001-02	472	184	66	495	1,217
2002-03	473	184	66	495	1,218
2003-04	473	184	66	495	1,218
2004-05	473	184	66	495	1,218
General Fund Expenditure on Health and Welfare					
1993-94	174	86	65	91	416
1994-95	174	87	65	91	417
1995-96	174	88	65	91	418
1996-97	174	89	65	91	419
1997-98	174	90	66	91	420
1998-99	174	90	66	91	420
1999-00	174	90	66	91	421
2000-01	174	90	66	91	421
2001-02	175	90	66	91	421
2002-03	175	90	66	91	421
2003-04	175	90	66	91	422
2004-05	175	90	66	91	422

SOURCE: Tables 3.5 to 3.8, and 2.20.

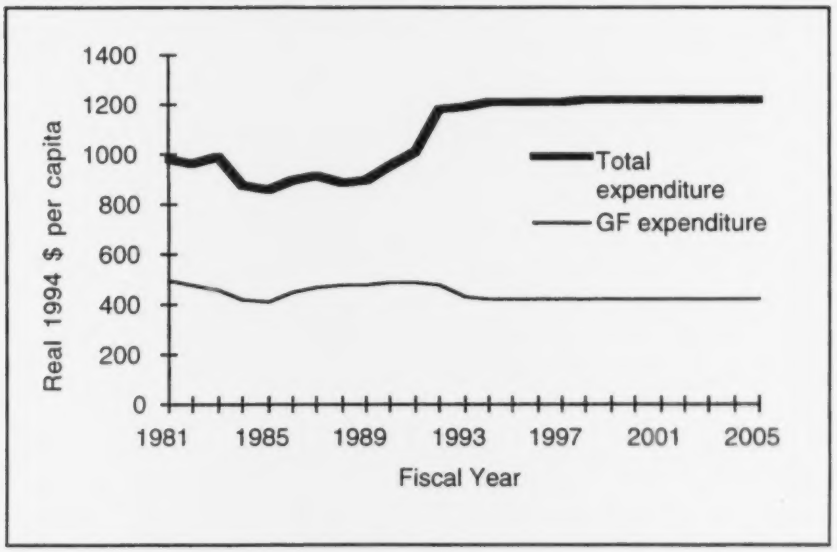

Figure 3.4–Real Per-Capita Expenditures on Health and Welfare

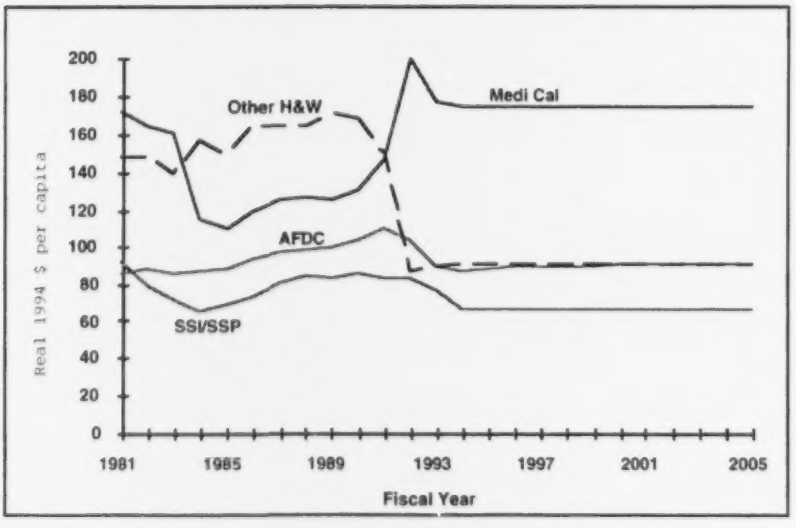

Figure 3.5–Real Per-Capita General Fund Expenditures on Health and Welfare

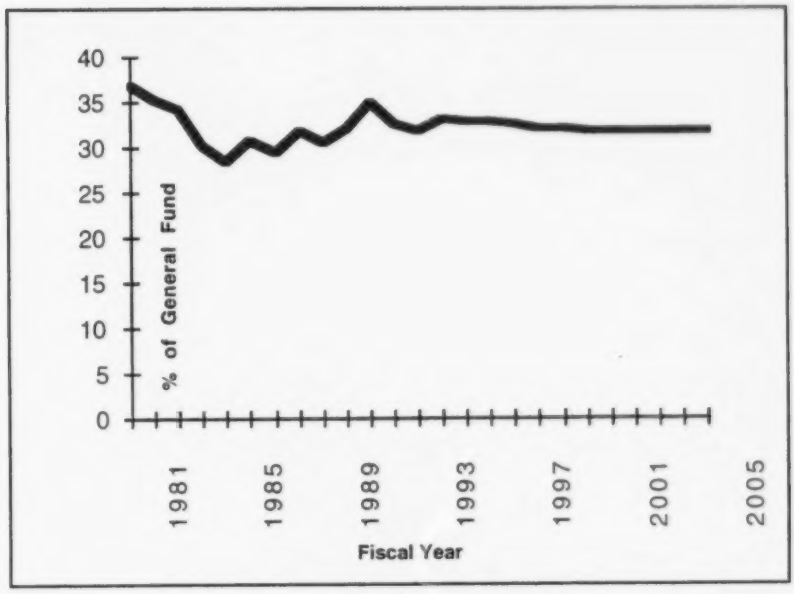

Figure 3.6–General-Fund Expenditure on Health and Welfare as Percent of General-Fund Revenue

4. Projecting Corrections Expenditures

The corrections share of California's General-Fund revenue nearly tripled during the 1980s and early 1990s. Because of the "three-strikes" law implemented in 1994, the proportion will more than double during the 1990s and early 2000s. When prison bond issues must be approved and budget cuts made in other programs to pay for corrections, popular enthusiasm for increased levels of incarceration may well diminish. However, if the new three-strikes law remains unchanged, spending on corrections will increase much faster than General-Fund revenues, as Figure 4.1 indicates.

In this section, we describe the three-strikes law, consider the historical trends in corrections, and present the information used in our projections of corrections costs (for both prisons and the youth authority).

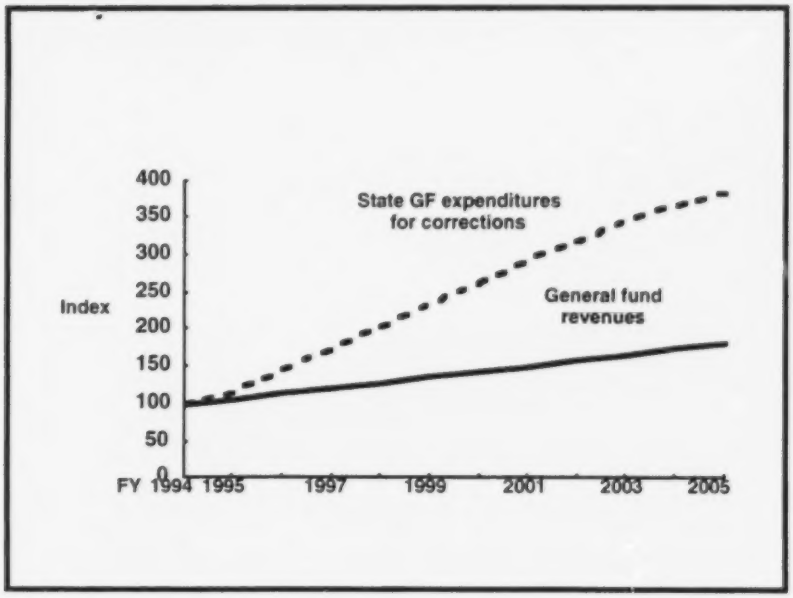

Figure 4.1—Spending on Corrections Will Grow Much Faster than Revenues

The Three-Strikes Law

California's three-strikes law[1] increases the number of criminals in prison in three ways. First, the new law increases the probability that a convicted criminal will go to prison, instead of receiving only probation or jail plus probation. Second, it increases the nominal sentence length. Third, it decreases the amount of "good time" awarded, making the actual sentence length a larger proportion of the nominal sentence. (See Greenwood et al., 1994, for a detailed analysis of the law's provisions and estimates of its effects on corrections costs and crime reduction.)

These three effects are triggered by the accumulation of "strikes," that is, convictions for "serious" crimes. Murder, rape, robbery, assault, arson, and more than half of burglaries are classified as serious crimes in California law. The rest of burglaries, thefts, motor vehicle thefts, and all other crimes such as drug law violations, are classified as not serious. The distinction is primarily whether a victim suffers, or could potentially suffer, bodily harm. By this definition, about a third of all felonies are serious crimes.

Receiving a second strike (that is, being convicted of a second serious crime) results in (a) the certainty of a prison sentence (as opposed to only about a one-third chance under previous law), (b) a nominal sentence double that under previous law, and (c) good time of only 20 percent (down from 50 percent under previous law). RAND's analysis of the new law estimated that 74 percent of the cost and 85 percent of the crime-reduction benefits of the three-strikes law comes from its second-strike provisions (Greenwood, et al., 1994, p. 26). However, the third-strike provisions give the law its name. In addition to the certainty of a prison sentence and the earning of only 20 percent good time, a third strike results in a nominal sentence of at least 25 years. Moreover, the 25-year sentence is triggered by conviction for any felony—serious or not—provided the convicted criminal already has two strikes.

Historical Trends

Tougher sentencing in California did not start with 1994's three-strikes law. Although the proportion of the General Fund going to corrections declined slightly during the 1970s (from 4.2 percent to 3.4 percent), it climbed steadily

[1] The new law (AB 971) was signed by Governor Wilson in March 1994. Usually called the three-strikes law, it is also referred to as the Jones law after one of the legislation's sponsors.

during the 1980s and early 1990s. The 3.4 percent in 1980 grew to 6.8 percent by 1990 and to 8.5 percent by 1994.

Because of price inflation, the increase in nominal corrections cost from 1970 to 1994 was huge, a factor of 18.6. Removing the effect of price inflation to get real cost drops the growth factor to 4.6. Dividing by California's growing population shows that real per-capita spending on corrections grew by a factor of 2.8 over the 24-year time period. Real General-Fund revenue per capita also grew over this period, but not as much as the corrections cost. Corrections cost as a percent of General-Fund revenue grew by a factor of 2.0 from 1970 to 1994. (See Table 4.1 for the history of California's corrections cost from 1970 through 1994.)

Projecting Corrections Costs

Prison Costs

Drawing upon the analysis done for Greenwood et al. (1994), we project that if the three-strikes law is fully implemented, the number of prisoners in California will increase by a factor of 3.2, from 116,000 in 1992–1993 to 376,000 in 2004–2005. We derive the prison cost estimates by multiplying operating cost per prisoner and debt-service cost per prisoner by the prisoner estimates (Table 4.2).

Projections of prison populations made by the California Department of Corrections are lower than those used in this analysis. For example, the Greenwood et al. (1994) analysis used here projects that the three-strikes law will have caused California's prison population to reach 284,000 by the end of fiscal year 1998–1999 (see Table 4.2). In contrast, in 1994, the Department of Corrections projected that the prison population at the end of fiscal year 1998–1999 would be 236,000,[2] and in 1995 they lowered that projection to 183,000.[3] Our interpretation of these differences is that the Greenwood et al. (1994) projection shows what would happen if the letter of the three-strikes law were implemented, and the Department of Corrections projections show what may well happen when the reality of the implied costs becomes apparent. The anticipated changes in the three-strikes law that would result in the lower projected prison population are not spelled out in the Corrections Department analysis. However, the analysis in Greenwood et al. (1994) showed that there are

[2]California Department of Corrections (1994, Table 1) projects an institution population for 1999 of 246,000. Subtracting an estimated 10,000 Youth Authority wards leaves 236,000 estimated adult prisoners.

[3]California Department of Corrections (1995, Table 1) projects an institution population for 1999 of 193,000. Subtracting an estimated 10,000 Youth Authority wards leaves 183,000 estimated adult prisoners.

Table 4.1

**Corrections Cost,
California, 1970–1994**

Fiscal Year	Nominal ($ Millions)	Real 1994 $ ($ Millions)	Real 1994 $ Per Capita	% of General Fund
1969-70	182	717	36.32	4.2
1970-71	193	735	36.65	4.3
1971-72	206	757	37.19	3.8
1972-73	236	820	39.86	4.0
1973-74	268	844	40.44	4.0
1974-75	315	901	42.53	3.7
1975-76	350	941	43.70	3.7
1976-77	389	976	44.49	3.5
1977-78	430	999	44.68	3.2
1978-79	498	1,044	45.72	3.3
1979-80	599	1,086	46.69	3.4
1980-81	695	1,136	47.76	3.7
1981-82	832	1,277	52.59	4.2
1982-83	834	1,260	50.79	4.1
1983-84	965	1,389	54.82	4.1
1984-85	1,198	1,648	63.82	4.5
1985-86	1,555	2,074	78.55	5.5
1986-87	1,773	2,272	83.97	5.5
1987-88	2,009	2,462	88.83	6.2
1988-89	2,137	2,494	87.83	5.8
1989-90	2,584	2,860	98.13	6.8
1990-91	2,834	3,011	100.45	7.5
1991-92	3,091	3,172	103.51	7.5
1992-93	3,044	3,044	97.25	7.6
1993-94	3,383	3,284	102.94	8.5
Ratio 1994/1970	18.6	4.6	2.8	2.0

SOURCES: (a) Nominal corrections cost: California's fiscal history, 1969-1970 to 1992-1993, historical series from Governor's Budgets adjusted for consistency with current accounts by RAND(ratio of debt service to operating cost in 1992-1993 used to estimate debt service in earlier years); and Governor's Budget Summary, 1995-1996 (for 1993-1994 actual cost); (b) price, population, and General-Fund deflators.

Table 4.2

Costs of Adult Corrections with the Three-Strikes Law

Fiscal Year	Prisoners	Operating Cost		Debt Service	
		Cost per Prisoner ($)	Total ($ Millions)	Cost per Prisoner	Total ($ Millions)
1993-94	116,113	23,331	2,709	2,739	318
1994-95	15,7810	24,031	3,792	2,821	445
1995-96	193,692	24,752	4,794	2,905	563
1996-97	226,349	25,494	5,771	2,993	677
1997-98	256,770	26,259	6,743	3,082	791
1998-99	283,612	27,047	7,671	3,175	900
1999-00	310,227	27,858	8,642	3,270	1,014
2000-01	331,984	28,694	9,526	3,368	1,118
2001-02	348,892	29,555	10,311	3,469	1,210
2002-03	365,910	30,441	11,139	3,573	1,308
2003-04	374,150	31,355	11,731	3,681	1,377
2004-05	375,530	32,295	12,128	3,791	1,424

SOURCES: (a) Prisoner projections are from the analysis done for Greenwood, et al., 1994; (b) cost factors for operating cost and debt service are 1994 expenditures per prisoner inflated by the price index.

considerably less costly alternatives to the specific three-strikes law adopted by California.[4]

Youth Authority Cost

To project Youth Authority cost, we assume that real cost increases in proportion to the number of California's school-age children. That population is expected to increase by a factor of 1.4 (from 5.8 million in 1992–1993 to 7.9 million in 2004–2005). To get nominal dollars, we inflate the estimates using the price index (see Table 4.3).

Summary of Projections

Adding the operating and debt-service costs of adult corrections to the youth authority cost gives our projections of the total cost of corrections in California. All these costs are paid for from California's General Fund. Table 4.4 shows

[4]For example, Greenwood et al. (1994, Table 4.4, p. 26) shows that if the "third strike" were redefined to be a *violent* felony (rather than *any* felony as in the current three-strikes law), the average annual cost of the law (which is driven primarily by the projected size of the prison population) would decrease by 29 percent.

Table 4.3

Cost of Youth Corrections

Fiscal Year	Population Ages 5-17		Price Index	Cost of Youth Corrections ($ Millions)
	Thousands	Index		
1993-94	5792	1.000	1.000	356
1994-95	5956	1.028	1.030	377
1995-96	6156	1.063	1.061	401
1996-97	6402	1.105	1.093	430
1997-98	6629	1.145	1.126	459
1998-99	6842	1.181	1.159	488
1999-00	7036	1.215	1.194	516
2000-01	7244	1.251	1.230	548
2001-02	7425	1.282	1.267	578
2002-03	7604	1.313	1.305	610
2003-04	7763	1.340	1.344	641
2004-05	7902	1.364	1.384	672

SOURCES: (a) Population: California Department of Finance, Demographic Research Unit; (b) price index: Table 2.20.

Table 4.4

Corrections Expenditures

California, 1994–2005

Fiscal Year	Nominal ($ Millions)	Real 1994 $ ($ Millions)	Real 1994 $ Per Capita	% of General Fund
1993-94	3,383	3284	102.94	8.5
1994-95	4,614	4350	133.75	11.0
1995-96	5,758	5270	158.78	13.0
1996-97	6,878	6111	180.46	14.6
1997-98	7,993	6895	199.70	16.0
1998-99	9,059	7587	215.63	17.2
1999-00	10,173	8272	230.90	18.3
2000-01	11,192	8835	242.42	19.2
2001-02	12,100	9274	250.26	19.8
2002-03	13,056	9715	257.93	20.4
2003-04	13,750	9933	259.67	20.5
2004-05	14,224	9976	256.87	20.3
Ratio 2005/1994	4.2	3.0	2.5	2.4

SOURCE: Tables 4.2, 4.3, and 2.20.

NOTE: All corrections expenditures are from the General Fund.

projected costs, assuming that the three-strikes law is fully implemented. Figure 4.2 combines the projections in this table with the history in Table 4.1 to show the long-term pattern of corrections cost as a percent of General-Fund revenue. The surge caused by the three-strikes law is truly unprecedented.

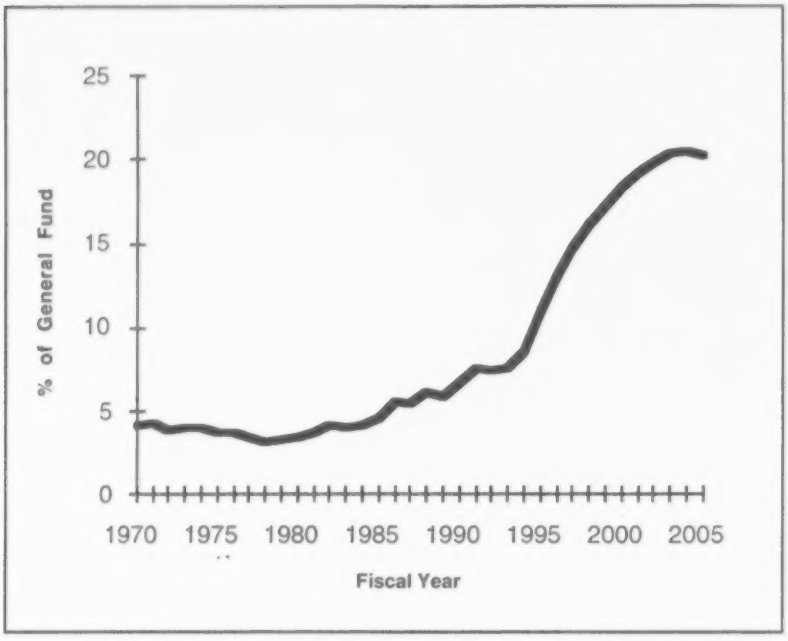

Figure 4.2—Corrections Cost as Percent of General-Fund Revenue, 1970–2005

5. Projecting K–14 Education Expenditures

In Section 1, we projected that General-Fund revenues and spending on K–14 education would rise about equally over the next decade, as shown in Figure 5.1.

In this section, we present the material that supports this projection. We begin by reviewing the political context and historical trends in K–14 spending from 1970 to 1994. We then project K–14 expenditures as they will be affected by the provisions of two ballot initiatives that basically create the framework for K–14 finance in the state.

Historical Trends

Today, California expenditures for K–14 education are supported primarily by General-Fund revenues and locally raised revenues, with relatively minor contributions from federal sources. The largest share of local revenues comes from property taxes. Until the late 1970s, local revenues supported the bulk of

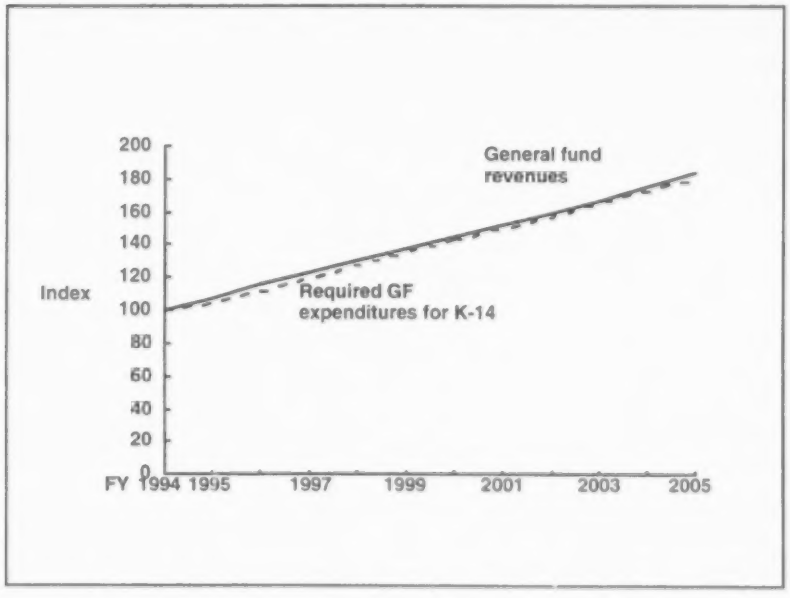

Figure 5.1—Expenditures for K–14 Education Will Rise as Fast as State Revenues

K–14 spending. Some political background is essential to understanding why and how this changed and the implications for subsequent and future trends.

In 1978, California's voters passed Proposition 13, which reduced property-tax revenue by more than half and, consequently, property-tax support of K–14 education. In reaction, the state increased K–14's share of General-Fund revenues and reduced its share of total property-tax revenues. Concerned about what tight funding might do to the quality of K–14 education, in 1988, the voters passed Proposition 98. It established a minimum level of state spending for K–14 education. However, the state's worsening economy convinced voters in 1990 to pass Proposition 111, which introduced a set of exceptions and qualifications to Proposition 98's rules. Finally, to take some of the pressure off the General Fund, the state increased the share of total property taxes allocated to K–14 education almost to pre-Proposition 13 levels.

Figure 5.2 shows the impact of Proposition 13 on total property taxes and on the property taxes available to support K–14 education. Both the precipitous drop in total property taxes in 1979 and the increased share of taxes going to K–14 in the mid-1990s are clearly visible.

How did these events affect historical trends? With the passage of Proposition 13, total property tax revenues shrank from $10.3 billion (1978) to only $4.9 billion a year later, and property-tax funding for K–14 education fell from $5.4

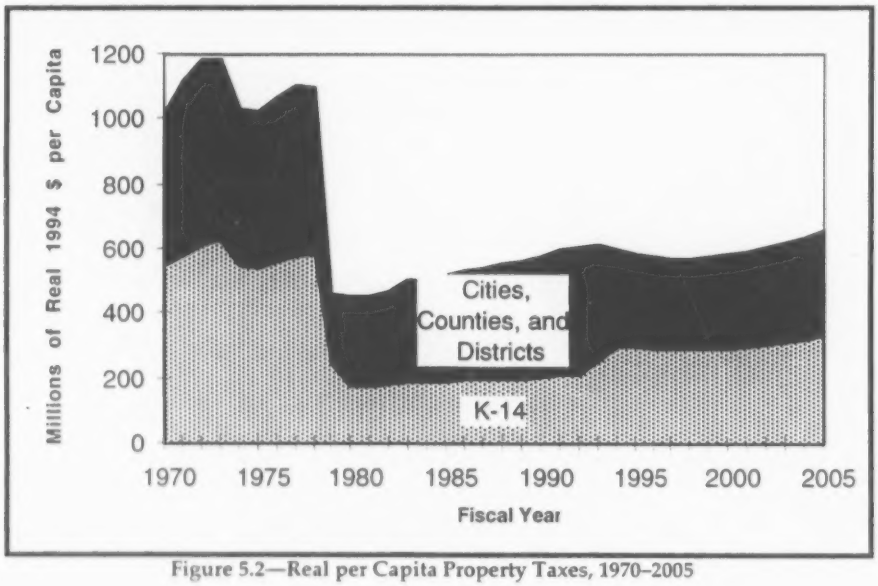

Figure 5.2—Real per Capita Property Taxes, 1970–2005

billion to $2.6 billion. Claims on property tax from other quarters also decreased K–14's *share* of those taxes during the 1980s and early 1990s: It dropped from a pre–Proposition 13 level of 53 percent to 39 percent by 1982 and 35 percent by 1992. Reversing this trend, the state increased K–14's share to 41 percent in 1993 and to 51 percent in 1994 (see Table 5.1).

To replace the revenue lost from property taxes, the state increased General Fund expenditures enough to prevent nominal *total* spending on K–14 from decreasing between 1978 to 1979 (see Table 5.2). However, *real* total spending on K–14 decreased by 9 percent.

The *percent of the General Fund* spent on K–14 rose from 28 percent in 1978 to 43 percent in 1979. This high level of General-Fund support continued for over a decade and did not fall below 40 percent until 1994 (see Table 5.3).

Projecting K–14 Expenditures Under Propositions 98 and 111

As previously stated, the finance of K–14 education is mandated by the provisions of Propositions 98 and 111. The specific calculations to implement these provisions are complex. In simulating K–14 finance, the first major task is modeling the provisions of the California Constitution and Education Code, which are defined by Propositions 98 and 111.[1] Conceptually, Proposition 98 creates a *baseline* level of funding for K–14 education in California. Unless the state goes into bad economic times, the spending floor remains at this baseline, which is defined by Tests 1 and 2 of the State Constitution, Section 8, subdivision (b). In bad times, however, Test 3 of the same section takes over and allows the state to spend less than the baseline amounts. When this situation occurs, the shortfall between actual spending and the baseline is called the *maintenance factor*. When bad times pass, provisions ensure that the state returns to the baseline and repays the maintenance factor. This process is called *restoration*.

Appendix B presents details of the model we used to make the calculations necessary for projecting the state's K–14 expenditures under Propositions 98 and 111. This chapter presents only the bottom line on *General-Fund* expenditures for K–14 education. As Table 5.4 shows, during the 1994–2005 projection period, we

[1] Much of the model documentation in this chapter can also be found in Shires et al. (1994, Appendix D) and in Shires (1995, Appendix E).

Table 5.1

Property Tax Revenue ($ Millions)
California, 1970–1994

Fiscal	K-14	Cities and Counties	Special Districts	Total	K-14 as percent of Total
1969-70	2,672	1,959	304	4,935	54.1
1970-71	2,977	2,406	334	5,717	52.1
1971-72	3,289	2,694	389	6,372	51.6
1972-73	3,613	2,780	427	6,820	53.0
1973-74	3,534	2,694	420	6,648	53.2
1974-75	3,874	3,029	478	7,381	52.5
1975-76	4,360	3,410	527	8,297	52.5
1976-77	4,933	3,830	604	9,368	52.7
1977-78	5,493	4,121	663	10,277	53.4
1978-79	2,597	1,762	551	4,910	52.9
1979-80	2,224	2,519	918	5,661	39.3
1980-81	2,470	2,934	956	6,360	38.8
1981-82	2,769	3,294	1,122	7,185	38.5
1982-83	3,013	3,717	1,277	8,007	37.6
1983-84	3,245	3,953	1,437	8,635	37.6
1984-85	3,484	4,386	1,567	9,437	36.9
1985-86	3,794	4,743	1,738	10,274	36.9
1986-87	4,039	5,154	1,933	11,126	36.3
1987-88	4,360	5,692	2,152	12,204	35.7
1988-89	4,724	6,209	2,374	13,308	35.5
1989-90	5,192	6,844	2,684	14,720	35.3
1990-91	5,749	7,603	3,046	16,398	35.1
1991-92	6,168	8,197	3,323	17,687	34.9
1992-93	7,709	7,813	3,115	18,636	41.4
1993-94	9,666	6,052	3,368	19,086	50.6
Ratio 1994/1970	3.6	3.1	11.1	3.9	0.9

SOURCE: California State Board of Equalization.

Table 5.2

Total Expenditure on K-14 Education by Funding Source ($ Millions), California, 1970-1994

Fiscal Year	General Fund	Property Taxes	Federal Funds	Special State Funds	Other Local Revenue	Total	Real 1994 $ Per Capita
1969-70	1,726	2,672	199	5	262	4,864	19,750
1970-71	1,778	2,977	238	6	275	5,274	20,649
1971-72	1,734	3,289	336	6	289	5,655	21,432
1972-73	1,935	3,613	349	6	310	6,213	22,235
1973-74	2,639	3,534	328	7	346	6,855	22,253
1974-75	2,876	3,874	337	8	387	7,483	22,016
1975-76	3,205	4,360	445	9	419	8,437	23,351
1976-77	3,539	4,933	490	10	457	9,428	24,384
1977-78	3,778	5,493	573	11	504	10,358	24,749
1978-79	6,604	2,597	673	12	570	10,454	22,563
1979-80	8,119	2,224	800	14	670	11,827	22,087
1980-81	8,826	2,470	907	16	760	12,979	21,852
1981-82	9,041	2,769	870	17	827	13,525	21,390
1982-83	9,125	3,013	795	19	863	13,816	21,496
1983-84	10,206	3,245	963	21	924	15,360	22,771
1984-85	11,574	3,484	992	22	981	17,053	24,164
1985-86	12,640	3,794	1,059	21	1,508	19,021	26,134
1986-87	13,874	4,039	1,146	21	1,449	20,528	27,092
1987-88	15,069	4,360	1,261	22	2,311	23,022	29,063
1988-89	15,652	4,724	1,469	24	2,837	24,706	29,701
1989-90	16,598	5,192	1,616	26	2,877	26,309	29,989
1990-91	16,181	5,749	1,749	28	2,469	26,176	28,649
1991-92	18,310	6,168	1,922	31	2,253	28,682	30,314
1992-93	17,652	7,709	2,103	32	2,601	30,096	30,998
1993-94	15,543	9,666	2,283	39	2,778	30,309	30,309
Ratio 1994/1970	9.0	3.6	11.5	7.1	10.6	6.2	1.5

SOURCES: (a) Property taxes from Table B.1; (b) General Fund, federal funds, special funds from Governor's Budget Summary, fiscal years 1969-1970 through 1993-1994; (c) other local revenue for K-12 from Shires, et al. (1995, Table C.1), with 1986 estimated to be the same as 1987 and with 1970 to 1985 estimated using the non-lottery, real per-capita amount for 1987, because the lottery income did not begin until 1986. Other local revenue for community colleges from Shires (1995, Table D.1), with 1970 to 1980 estimated using the real per-capita amount for 1981.

Table 5.3

General- Fund Expenditures on K–14 Education, California, 1970–1994

Fiscal Year	Nominal ($ Millions)	Real 1994 $ ($ Millions)	Real 1994 $ Per Capita	% of General Fund
1969-70	1,726	7,008	355	39.9
1970-71	1,778	6,960	347	39.2
1971-72	1,734	6,574	323	32.1
1972-73	1,935	6,925	336	32.4
1973-74	2,639	8,569	411	37.8
1974-75	2,876	8,461	400	33.3
1975-76	3,205	8,870	412	33.2
1976-77	3,539	9,152	417	31.1
1977-78	3,778	9,028	404	27.6
1978-79	6,604	14,252	624	43.4
1979-80	8,119	15,162	652	45.1
1980-81	8,826	14,859	625	46.4
1981-82	9,041	14,299	589	43.1
1982-83	9,125	14,198	572	43.0
1983-84	10,206	15,131	597	42.9
1984-85	11,574	16,400	635	43.6
1985-86	12,640	17,366	658	45.0
1986-87	13,874	18,310	677	42.7
1987-88	15,069	19,022	686	46.3
1988-89	15,652	18,817	663	42.4
1989-90	16,598	18,919	649	42.8
1990-91	16,181	17,710	591	42.3
1991-92	18,310	19,351	631	43.6
1992-93	17,652	18,181	581	43.1
1993-94	15,543	15,543	487	38.8
Ratio 1994/1970	9.0	2.2	1.4	1.0

SOURCES: Tables 5.2 and 2.20.

expect the nominal expenditure to increase considerably but real per-capita spending to increase only slightly.

In Section 2, we provided high and low estimates, in addition to the baseline estimate, for personal income and General Fund revenue (see Tables 2.11 and 2.19). We used those estimates to make high and low projections for General Fund spending on K–14 education. As Table 5.5 shows, the uncertainty about

Table 5.4

General Fund Expenditures on K–14 Education Under Proposition 98/111 California, 1994–2005

Fiscal Year	Nominal ($ Millions)	Real 1994 $ ($ Millions)	Real 1994 $ Per Capita	% of General Fund
1993-94	15,543	15,543	487	38.8
1994-95	16,420	15,942	490	38.5
1995-96	17,410	16,411	494	38.8
1996-97	18,560	16,985	502	38.9
1997-98	19,960	17,734	514	39.4
1998-99	21,050	18,158	516	39.5
1999-00	22,270	18,651	521	39.6
2000-01	23,350	18,986	521	39.5
2001-02	24,490	19,333	522	39.5
2002-03	25,670	19,674	522	39.5
2003-04	26,940	20,046	524	39.6
2004-05	28,020	20,242	521	39.4

SOURCES: Tables B.4 and 2.20.

Table 5.5

Alternative Estimates of General-Fund Expenditures on K–14 Education Under Proposition 98/111 ($ Millions) California, 1994–2005

Fiscal Year	Personal Income Projection		
	Low	Baseline	High
1993-94	15,543	15,543	15,543
1994-95	16,420	16,420	16,420
1995-96	17,410	17,410	17,410
1996-97	18,330	18,560	18,560
1997-98	19,640	19,960	20,180
1998-99	20,630	21,050	21,580
1999-00	21,640	22,270	23,290
2000-01	22,600	23,350	24,750
2001-02	23,600	24,490	26,450
2002-03	24,630	25,670	28,010
2003-04	25,730	26,940	29,680
2004-05	26,640	28,020	31,210

SOURCE: Alternative projections of personal income from Table 2.10 used in Proposition 98 model.

future personal income and General-Fund revenue in this analysis does not have much effect on projected K–14 expenditures. Although both General Fund and personal income projections are used in the Proposition 98 model, it turns out that during the 1994 to 2005 period only the personal-income projections affect the model output, so the low and high cases are labeled by personal-income scenario.

Summary of Real Expenditures per Student

Real expenditure per student provides an explicit measure of the support level for K–14 education. In Tables 5.6 and 5.7, we separate the expenditure projections for K–12 schools and community colleges.

Table 5.6

Total Expenditure on K–12 Education Under Proposition 98/111
by Source of Funding ($ Million)
California, 1994–2005

Fiscal Year	Nominal Expenditure ($ million) General Fund	Property Taxes	Federal Funds	Special State Funds	Other Local Revenue	Total	Real 1994 $ per ADA* Student
1988-89	14,149	4,064	1,469	22	2,680	22,384	5,956
1989-90	15,005	4,472	1,616	24	2,720	23,836	5,804
1990-91	14,444	4,959	1,749	26	2,370	23,548	5,303
1991-92	16,523	5,338	1,922	28	2,170	25,980	5,474
1992-93	16,267	6,699	2,101	29	2,490	27,586	5,569
1993-94	14,445	8,366	2,280	36	2,660	27,787	5,379
1994-95	15,121	8,617	2,384	38	2,782	28,942	5,357
1995-96	16,024	8,919	2,520	40	2,940	30,443	5,332
1996-97	17,074	9,276	2,665	42	3,109	32,166	5,327
1997-98	18,352	9,739	2,813	44	3,281	34,230	5,371
1998-99	19,356	10,324	2,959	47	3,453	36,139	5,390
1999-00	20,479	10,943	3,114	49	3,633	38,218	5,417
2000-01	21,482	11,709	3,279	52	3,826	40,347	5,431
2001-02	22,540	12,529	3,455	55	4,031	42,610	5,443
2002-03	23,637	13,406	3,645	58	4,252	44,997	5,449
2003-04	24,818	14,344	3,849	61	4,490	47,562	5,454
2004-05	25,835	15,492	4,055	64	4,731	50,177	5,461

SOURCES:

(a) Historical property taxes allocation to K-12 from Office of Legislative Analyst, State of California.

(b) Historical General Fund, Federal Funds, and Special Funds from Governor's Budget Summaries.

(c) Historical Other Local Revenues from Shires et al. (1994, Table C.1).

NOTES:

(a) Property taxes for K-12 are estimated using the 1993-94 percentage, 43.8%, of total property taxes.

(b) General fund estimated as a residual from allocating 90% of the sum of total general fund plus property taxes to K-12.

(c) Federal Funds, Special Funds, and Other Local Revenue projected assuming that real amounts per K-12 student are constant at their 1993-94 levels. See Table A.6 for the student counts.

* ADA = Average daily attendance.

Table 5.7

Total Expenditure on Community College Education Under Proposition 98/111 by Source of Funding ($ Million) California, 1994–2005

Fiscal Year	Nominal Expenditure ($ million) General Fund	Property Taxes	Federal Funds	Special State Funds	Other Local Revenue	Total	Real 1994 $ per FTE* Student
1988-89	1,503	660	-	2	157	2,322	3,331
1989-90	1,593	720	-	2	157	2,473	3,192
1990-91	1,737	790	-	2	99	2,628	3,408
1991-92	1,787	830	-	3	83	2,702	3,301
1992-93	1,385	1,010	1	3	111	2,510	2,789
1993-94	1,098	1,300	3	3	118	2,522	2,796
1994-95	1,299	1,339	3	3	126	2,770	2,876
1995-96	1,386	1,386	3	3	131	2,909	2,896
1996-97	1,486	1,441	4	3	138	3,073	2,905
1997-98	1,608	1,513	4	3	146	3,274	2,938
1998-99	1,694	1,604	4	3	153	3,459	2,948
1999-00	1,791	1,700	4	4	161	3,661	2,965
2000-01	1,868	1,819	4	4	170	3,866	2,974
2001-02	1,950	1,947	5	4	179	4,084	2,985
2002-03	2,033	2,083	5	4	188	4,313	2,997
2003-04	2,122	2,229	5	4	198	4,559	3,013
2004-05	2,185	2,407	5	5	208	4,810	3,022

SOURCES:

(a) Historical property taxes allocation to community colleges from Office of Legislative Analyst, State of California.

(b) Historical General Fund, Federal Funds, and Special Funds from Governor's Budget Summaries.

(c) Historical Other Local Revenues from Shires (1995, Table D.1).

NOTES:

(a) Property taxes for community colleges are estimated using the 1993-94 percentage, 6.8%, of total property taxes.

(b) General fund estimated as a residual from allocating 10% of the sum of total general fund plus property taxes to community colleges

(c) Federal Funds, Special Funds, and Other Local Revenue projected assuming that real amounts per community college FTE student are constant at their 1993-94 levels. See Table A.6 for the student counts.

*FTE = Full-Time equivalent.

A. Sensitivity to Revenue and Expense Assumptions

According to our baseline projections, from 1994 to 2005 California's General-Fund revenue will increase from $40.1 billion to $71.2 billion, and General-Fund expenditures for K–14 education, health and welfare, and corrections will increase from $32.3 billion to $64.9 billion. The proportion of General-Fund revenues required for these three expense categories will increase from 80 percent in 1994 to 91 percent in 2005.

General-Fund revenue not spent on K–14, health and welfare, and corrections supports higher education and other government functions (for example, the state legislature). From 1981 to 1994, that support averaged 20 percent of General-Fund revenue. According to our baseline projections, the support available for higher education and other government functions will be cut in half by 2005, from 20 percent to only 9 percent (see Figure A.1).

Our baseline projections of revenues and expenditures depend on the estimates and assumptions made during the course of the analyses discussed in the main text. Those analyses identified two key areas in which the implications of alternative assumptions should be assessed. First, in projecting personal income and General-Fund revenue (Section 2), the analysis considered alternative

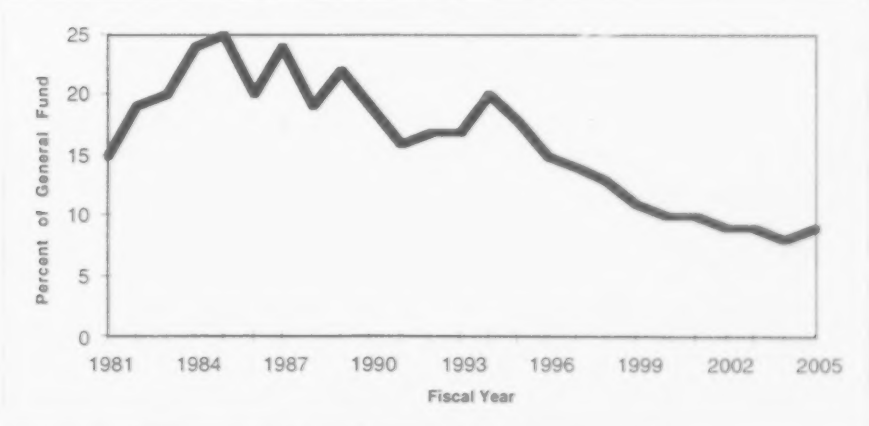

Figure A.1—Percent of General-Fund Revenue Available for Higher Education and Other Government Expenditures

assumptions that generated low and high estimates in addition to the baseline estimate (see Tables 2.11 and 2.19). Second, there could be pressure to restore K–14 expenditures to the 1989 level of support.

From these alternative assumptions, we constructed four alternatives for sensitivity analysis. The purpose of the sensitivity analysis is to test the robustness of our conclusion that 91 percent of General-Fund revenue will be spent on K–14, health and welfare, and corrections in 2005. The four alternative cases are:

- **High revenue**: High economic growth causes larger increases in personal income and General-Fund revenue than in the baseline case.
- **Low revenue**: Low economic growth causes smaller increases in personal income and General-Fund revenue than in the baseline case.
- **Baseline revenue and 1989 support for K–14**: Revenue remains at baseline, but expenses are higher because K–14 real expenditure per student is restored to the 1989 level.
- **Low revenue and 1989 support for K–14**: Revenue is lower and expenses are higher because K–14 real expenditure per student is restored to the 1989 level.

Tables A.1 through A.5 present the four alternatives, as well as the baseline projection. They are presented in order of increasing percentages of General-Fund revenue spent on the three major spending categories: K–14, health and welfare, and corrections.

If revenues are higher than in the baseline projection, 89 percent of the General Fund will be needed in 2005 for K–14, health and welfare, and corrections. Under this case, 11 percent of General-Fund revenue is available for higher education and other government functions (see Table A.1).

Table A.2 presents the details of the baseline projection. K–14, health and welfare, and corrections require 91 percent of General-Fund revenue in 2005, leaving 9 percent for higher education and other government.

The funding crisis deepens if we assume that revenue will be lower than in the baseline projection: As Table A.3 indicates, 94 percent of General-Fund revenue will be required in 2005 for the three major expense categories, and only 6 percent will remain to support higher education and other government activities.

The scenarios considered thus far assume that spending on K–14 education will be kept at the lowest levels allowed by Proposition 98. Under these scenarios,

real spending per student is declining. It would take increased resources to maintain real per-pupil spending at historical levels.[1] In the scenarios shown in Tables A.4 and A.5, K–14 spending is restored to 1989 levels (of real expenditure per student).

If we assume General-Fund revenues at the baseline level and 1989 K–14 spending, 98 percent of those revenues are consumed by the three major categories, leaving only 2 percent for higher education and other government (Table A.4). If we assume 1989-level spending on K–14 and *lower resources*, K–14, health and welfare, and corrections consume 103 percent of General-Fund revenues. Nothing (in fact, less than nothing, minus two percent) would be left to support higher education and other government activities.

Figure A.2 graphs the annual percentages spent on K–14 education, health and welfare, and corrections for the alternative cases. These results have two general implications: First, the finding of a fiscal crisis is robust—there is a funding problem for higher education and other government functions in all our five cases. Second, the effect of policy options (cutting corrections cost or increasing K–14 support) is larger than the effect of uncertainty about revenue projections.

---

[1]Table A.6 contains the student projections we used in our calculations. Table A.7 shows the total K–14 expenditures needed to make real spending per full-time equivalent (FTE) student for 1995 through 2005 be at the 1989 level.

Table A.1

Total General-Fund Revenue and General-Fund Expenditures on K–14 Education, Health and Welfare, and Corrections, 1994–2005
(Case: High Revenue)

Fiscal Year	General-Fund Revenue	General-Fund Expenditures on K–14, Health and Welfare, and Corrections			
		K–14	H&W	Corrections	Total
		Nominal Dollars ($ Billions)			
1993–94	40.1	15.5	13.3	3.4	32.2
1994–95	42.6	16.4	14.0	4.6	35.0
1995–96	44.9	17.4	14.7	5.8	37.9
1996–97	47.7	18.6	15.5	6.9	40.9
1997–98	51.1	20.2	16.3	8.0	44.5
1998–99	54.3	21.6	17.1	9.1	47.8
1999–00	58.2	23.3	18.0	10.2	51.5
2000–01	61.7	24.8	18.9	11.2	54.8
2001–02	65.6	26.5	19.8	12.1	58.3
2002–03	69.1	28.0	20.7	13.1	61.8
2003–04	72.8	29.7	21.7	13.7	65.1
2004–05	76.6	31.2	22.7	14.2	68.1
		Percent of General-Fund Revenue			
1993–94	100%	39%	33%	8%	80%
1994–95	100%	39%	33%	11%	82%
1995–96	100%	39%	33%	13%	84%
1996–97	100%	39%	32%	14%	86%
1997–98	100%	40%	32%	16%	87%
1998–99	100%	40%	32%	17%	88%
1999–00	100%	40%	31%	17%	88%
2000–01	100%	40%	31%	18%	89%
2001–02	100%	40%	30%	18%	89%
2002–03	100%	41%	30%	19%	89%
2003–04	100%	41%	30%	19%	89%
2004–05	100%	41%	30%	19%	89%

SOURCES: Revenue from Table 2.19 (high growth), K–14 from Table 5.5 (high personal income), health and welfare from Table 3.10, and corrections from Table 4.4.

Table A.2

Total General-Fund Revenue and General-Fund Expenditures on K–14 Education, Health and Welfare, and Corrections, 1994–2005
(Case: Baseline Projection)

		General-Fund Expenditures on K–14, Health and Welfare, and Corrections			
Fiscal Year	General-Fund Revenue	K–14	H&W	Corrections	Total
		Nominal Dollars ($ Billions)			
1993–94	40.1	15.5	13.3	3.4	32.2
1994–95	42.6	16.4	14.0	4.6	35.0
1995–96	44.8	17.4	14.7	5.8	37.9
1996–97	47.7	18.6	15.5	6.9	40.9
1997–98	50.6	20.0	16.3	8.0	44.3
1998–99	53.3	21.1	17.1	9.1	47.3
1999–00	56.3	22.3	18.0	10.2	50.4
2000–01	59.1	23.4	18.9	11.2	53.4
2001–02	62.1	24.5	19.8	12.1	56.4
2002–03	65.0	25.7	20.7	13.1	59.4
2003–04	68.0	26.9	21.7	13.7	62.4
2004–05	71.2	28.0	22.7	14.2	64.9
		Percent of General–Fund Revenue			
1993–94	100%	39%	33%	8%	80%
1994–95	100%	39%	33%	11%	82%
1995–96	100%	39%	33%	13%	85%
1996–97	100%	39%	33%	14%	86%
1997–98	100%	39%	32%	16%	87%
1998–99	100%	39%	32%	17%	89%
1999–00	100%	40%	32%	18%	90%
2000–01	100%	39%	32%	19%	90%
2001–02	100%	39%	32%	19%	91%
2002–03	100%	39%	32%	20%	91%
2003–04	100%	40%	32%	20%	92%
2004–05	100%	39%	32%	20%	91%

SOURCES: Revenue from Table 2.19 (baseline), K–14 from Table 5.5 (baseline), Health and Welfare from Table 3.10, and corrections from Table 4.4.

Table A.3

Total General-Fund Revenue and General-Fund Expenditures on K–14 Education, Health and Welfare, and Corrections, 1994–2005
(Case: Low Revenue)

		General-Fund Expenditures on K–14, Health and Welfare, and Corrections			
Fiscal Year	General-Fund Revenue	K–14	H&W	Corrections	Total
		Nominal Dollars ($ Billions)			
1993–94	40.1	15.5	13.3	3.4	32.3
1994–95	42.2	16.4	14.0	4.6	35.0
1995–96	44.1	17.4	14.7	5.8	37.9
1996–97	46.5	18.3	15.5	6.9	40.7
1997–98	49.3	19.6	16.3	8.0	44.0
1998–99	51.8	20.6	17.1	9.1	46.8
1999–00	54.3	21.6	18.0	10.2	49.8
2000–01	57.0	22.6	18.9	11.2	52.7
2001–02	59.6	23.6	19.8	12.1	55.5
2002–03	62.2	24.6	20.7	13.1	58.4
2003–04	65.0	25.7	21.7	13.7	61.1
2004–05	67.9	26.6	22.7	14.2	63.5
Percent of General-Fund Revenue					
1993–94	100%	39%	33%	8%	80%
1994–95	100%	39%	33%	11%	83%
1995–96	100%	40%	33%	13%	86%
1996–97	100%	39%	33%	15%	88%
1997–98	100%	40%	33%	16%	89%
1998–99	100%	40%	33%	17%	90%
1999–00	100%	40%	33%	19%	92%
2000–01	100%	40%	33%	20%	92%
2001–02	100%	40%	33%	20%	93%
2002–03	100%	40%	33%	21%	94%
2003–04	100%	40%	33%	21%	94%
2004–05	100%	39%	33%	21%	94%

SOURCES: Revenue from Table 2.19 (low growth), K–14 from Table 5.5 (low personal income), health and welfare from Table 3.10, and corrections from Table 4.4.

Table A.4

Total General-Fund Revenue and General-Fund Expenditures on K–14 Education, Health and Welfare, and Corrections, 1994–2005
(Case: Baseline Revenue, 1989-Level K–14 Expenditures)

Fiscal Year	General Revenue	General-Fund Expenditures on K–14, Health and Welfare, and Corrections			
		K–14	H & W	Corrections	Total
		Nominal Dollars ($ Billions)			
1993–94	40.1	15.5	13.3	3.4	32.2
1994–95	42.6	20.0	14.0	4.6	38.6
1995–96	44.8	21.3	14.7	5.8	41.8
1996–97	47.7	22.7	15.5	6.9	45.0
1997–98	50.6	24.0	16.3	8.0	48.3
1998–99	53.3	25.1	17.1	9.1	51.3
1999–00	56.3	26.4	18.0	10.2	54.5
2000–01	59.1	27.5	18.9	11.2	57.6
2001–02	62.1	28.8	19.8	12.1	60.7
2002–03	65.0	30.1	20.7	13.1	63.9
2003–04	68.0	31.6	21.7	13.7	67.0
2004–05	71.2	32.8	22.7	14.2	69.7
		Percent of General-Fund Revenue			
1993–94	100	39	8	33	80
1994–95	100	47	11	33	91
1995–96	100	47	13	33	93
1996–97	100	48	14	33	94
1997–98	100	47	16	32	95
1998–99	100	47	17	32	96
1999–00	100	47	18	32	97
2000–01	100	47	19	32	97
2001–02	100	46	19	32	98
2002–03	100	46	20	32	98
2003–04	100	46	20	32	98
2004–05	100	46	20	32	98

SOURCES: Revenue from Table 2.19 (baseline), K–14 from Table A.7 (General Fund), health and welfare from Table 3.10, and corrections from Table 4.4.

Table A.5

Total General-Fund Revenue and General-Fund Expenditures on K–14 Education, Health and Welfare, and Corrections, 1994–2005
(Case: Low Revenue, 1989 Support for K–14)

		General-Fund Expenditures on K–14, Health and Welfare, and Corrections			
Fiscal Year	General-Fund Revenue	K–14	H&W	Corrections	Total
		Nominal Dollars ($ Billions)			
1993–94	40.1	15.5	13.3	3.4	32.2
1994–95	42.2	20.0	14.0	4.6	38.6
1995–96	44.1	21.3	14.7	5.8	41.8
1996–97	46.5	22.7	15.5	6.9	45.1
1997–98	49.3	24.0	16.3	8.0	48.3
1998–99	51.8	25.1	17.1	9.1	51.3
1999–00	54.3	26.4	18.0	10.2	54.5
2000–01	57.0	27.5	18.9	11.2	57.6
2001–02	59.6	28.8	19.8	12.1	60.7
2002–03	62.2	30.1	20.7	13.1	63.9
2003–04	65.0	31.6	21.7	13.7	67.0
2004–05	67.9	32.8	22.7	14.2	69.7
		Percent of General-Fund Revenue			
1993–94	100%	39%	33%	8%	80%
1994–95	100%	47%	33%	11%	91%
1995–96	100%	48%	33%	13%	95%
1996–97	100%	49%	33%	15%	97%
1997–98	100%	49%	33%	16%	98%
1998–99	100%	49%	33%	17%	99%
1999–00	100%	49%	33%	19%	100%
2000–01	100%	48%	33%	20%	101%
2001–02	100%	48%	33%	20%	102%
2002–03	100%	49%	33%	21%	103%
2003–04	100%	49%	33%	21%	103%
2004–05	100%	48%	33%	21%	103%

SOURCES: Revenue from Table 2.19 (low growth), K–14 from Table A.7 (General Fund), health and welfare from Table 3.10, and corrections from Table 4.4.

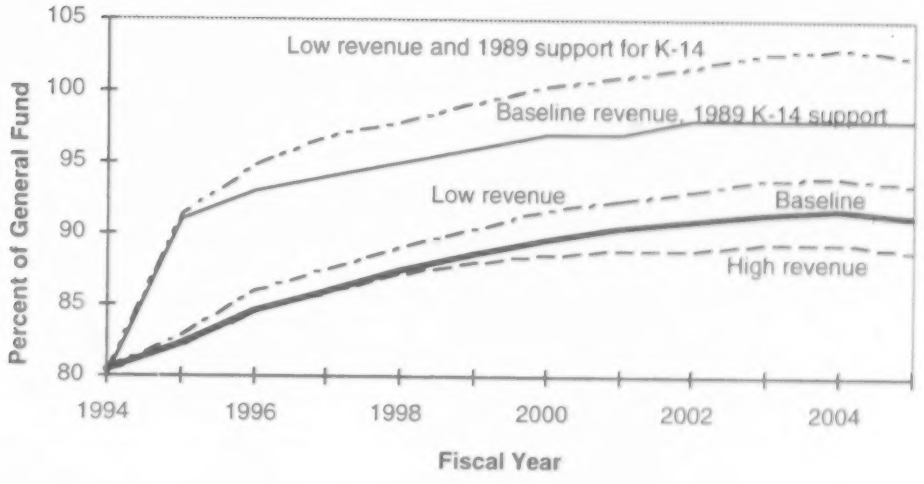

Figure A.2—General-Fund Expenditures on K–14, Health and Welfare, and Corrections as Percent of General-Fund Revenue, 1994–2005

Table A.6

Total K-14 Students (Full-Time Equivalents), California, 1989–2005

Fiscal Year	K–12 ADA	CC FTE	Total Students FTE
		(in thousands)	
1988-89	4,518	838	5,356
1989-90	4,681	883	5,564
1990-91	4,860	844	5,704
1991-92	5,016	865	5,881
1992-93	5,102	927	6,029
1993-94	5,166	902	6,068
1994-95	5,245	935	6,180
1995-96	5,382	947	6,329
1996-97	5,526	968	6,494
1997-98	5,662	990	6,652
1998-99	5,784	1,012	6,796
1999-00	5,909	1,034	6,943
2000-01	6,041	1,057	7,098
2001-02	6,180	1,080	7,260
2002-03	6,329	1,103	7,432
2003-04	6,489	1,126	7,615
2004-05	6,638	1,150	7,788

SOURCES:

(a) K-14 Average Daily Attendance (ADA) from Table B.6.

(b) Community College (CC) Full-Time Equivalents (FTE): from analysis done for Shires (1995).

Table A.7

Total Expenditure on K–14 Education at 1989 Spending per Student
By Source of Funding ($ Millions)
California, 1994–2005

Fiscal Year	General Fund	Property Taxes	Federal Funds	Special State Funds	Other Local Revenue	Total
1993-94	15,543	9,666	2,283	39	2,778	30,309
1994-95	20,007	9,956	2,388	41	2,908	35,299
1995-96	21,292	10,305	2,523	43	3,071	37,234
1996-97	22,673	10,717	2,669	45	3,248	39,351
1997-98	23,974	11,253	2,816	48	3,427	41,518
1998-99	25,142	11,928	2,963	50	3,606	43,689
1999-00	26,364	12,643	3,118	53	3,794	45,973
2000-01	27,546	13,529	3,283	56	3,996	48,409
2001-02	28,796	14,476	3,460	59	4,210	51,000
2002-03	30,134	15,489	3,649	62	4,440	53,774
2003-04	31,571	16,573	3,854	65	4,688	56,751
2004-05	32,814	17,899	4,061	69	4,939	59,782

SOURCES:
(a) Non-general-fund components from Table B.8.

(b) Total projected by assuming that the real amount per FTE student is constant at the 1988–1989 level, using the total student FTE projection in Table A.6 .

(c) General-Fund expenditures estimated as a residual.

B. Modeling K–14 Expenditures

This appendix describes the formal model we used in making the calculations necessary to project the General-Fund expenditures on K–14 education. The goal of this analysis is to estimate the future prospects for K–14 finance in California. Because the Proposition 98/111 calculation uses a deflator different from the California Consumer Price Index (CPI),[1] we make all calculations in nominal dollars and then convert the results to constant dollars, using the CPI to assure comparability.

Variables and Conventions

In this appendix, we present the mathematical forms of this model and its underlying equations. All terms are nominal for purposes of executing the simulation model. For reporting purposes, we deflate results by the appropriate inflation rate. The following variables are used throughout.

t: This is an index for the given year.

α: This coefficient represents the required minimum proportion of the state's General-Fund revenues that must go to K–14 education under Proposition 98 under Test 1.

$A1_t$: This is the Test 1 calculated amount used for calculating the actual Proposition 98 minimum-funding guarantee.

$A2_t$: This is the Test 2 calculated amount used for calculating the actual Proposition 98 minimum-funding guarantee.

$A3_t$: This is the Test 3 calculated amount used for calculating the actual Proposition 98 minimum-funding guarantee.

$A3a_t$: This is the Test 3a calculated amount used for calculating the actual Proposition 98 minimum-funding guarantee.

$A3b_t$: This is the Test 3b calculated amount used for calculating the actual Proposition 98 minimum-funding guarantee.

B_t: The state and local commitment to education in year t. It equals the K–14 portion of state General Fund and those local property taxes allocated for K–14 education.

[1] The proposition uses the change in per-capita personal income as an inflation index.

E_t: Total K-12 average daily attendance (ADA) enrollment in public schools in year t.

G_t: The state General Fund in year t.

H_t: The per capita state General Fund in year t, arrived at by dividing G_t by P_t.

I_t: Total personal income in California in year t.

J_t: Per-capita state personal income in year t, derived by dividing I_t by P_t.

N_t: The "hypothetical baseline" in year t. The hypothetical baseline is a value used in calculating the restoration of the maintenance factor in post-Test Three (see below) or post-suspension years.[2] It is equal to the level of the minimum-funding guarantee in year t if the suspension or Test Three had never occurred in a prior year.

$N1_t$: This is the Test 1 calculated amount used for calculating the baseline.

$N2_t$: This is the Test 2 calculated amount used for calculating the baseline.

$N3_t$: This is the cap by which the Test 2 baseline amount is allowed to grow after a Test 1 year.

P_t: State population in year t.

R_t: The amount of the maintenance factor to be restored in a year t (see below for discussion of restoration of maintenance factors).

S_t: The state General-Fund budget for K–14 education in year t also equal to $(B_t - X_t)$.

X_t: The portion of local property taxes allocated to K–14 education in year t.

In addition, we calculate the Proposition 98/111 guarantee amount associated with each of the three tests. The result of the Test 1 calculation is designated A1, the result of Test 2 is A2, the result of Test 3a is A3a, and the result of the Test 3b calculation is A3b.

The first stage in this analysis is to calculate the baseline floor for K–14 spending. We use two terms with similar, but very specific meanings—baselines and budgets. The baseline is the hypothetical level of spending for K–14, absent any interruptions caused by poor economic years and suspensions.[3] The budget is

[2]The state has the option of suspending the Proposition 98 funding requirements in a given year.

[3]Most of the provisions of Proposition 98 can be suspended for one year. This analysis does not consider the effects of suspensions of these provisions.

the *actual* spending in a given year. If a Test 3 year never occurs, then the two are equal.

The Baseline

The first step is calculating the baseline amounts for K–14 education over the next decade. In spirit, this baseline is what the education budget would have been if the General Fund had grown enough to support the "Test 1-Test 2" amounts. The specific language guiding the calculations for the baseline amounts for Tests 1 and 2 are provided in California Constitution Article XVI, Section 8, subdivision (b), paragraphs (1) and (2), respectively. The baseline amount in any year is given by the greater of Test 1 and 2 amounts as they are specified in Section 8. The details of these two amounts are presented below.

Baseline Test 1

Test 1 requires that a minimum proportion of the California General Fund be allocated to K–14 education. The total[4] baseline amount allocated to K–14 education under this scenario is then given in Equation (B.1).

$$N1_t = \alpha G_t + X_t \qquad \text{(B.1)}$$

For K–14 education, the share of the General Fund was 40.737 percent in 1988-89 to 1991-92, 37.719 percent in 1992-93, and 34.004 percent in 1993-94 and thereafter.[5] The changes result from adjusting to the increased use of local property taxes to fund education.

Baseline Test 2

The Test 2 amount is defined by the language in Article XVI, Section (8)(b)(2). It requires that real per-pupil expenditures[6] this year at least equal the prior year's expenditures. Equation (B.2) presents that calculation.

---

[4]The state commitment to K–14 refers to the total state General-Fund commitment plus the total local property tax proceeds allocated to K–14 education.

[5]This amount was determined as the "percentage of General Fund revenues appropriated for school districts and community college districts, respectively in fiscal year 1986-87" [State Constitution, Article XVI, Section 8 (b) (1)].

[6]The provisions of the law require that the enrollment growth factor used here is the change in *K–12 enrollments*, not K–14 enrollments.

$$N2_t = N_{t-1}\left(\frac{E_t}{E_{t-1}}\right)\left(\frac{J_t}{J_{t-1}}\right) \quad \text{(B.2)}$$

Note that, in general, this year's Test 2 amount is a function of last year's baseline amount (N_{t-1}), not the prior year's baseline Test 2 amount, $N2_{t-1}$. If, in the prior year, N_t was determined by Test 1 (N1>N2) and Test 1 represented extraordinary growth levels, then the potential would exist for a significant "ratcheting up" of the baseline amount. The state took this into account in implementing Proposition 98 and included a 1.5 percent growth cap on Test 1 in a given year.[7] This cap is implemented in Equation (B.3).[8]

$$N3_t = (0.015)G_{t-1} \quad \text{(B.3)}$$

Putting these all together produces Equation (B.4) for the final determination of the baseline amount. This equation says that the hypothetical baseline amount in year t equals at least the Test 2 amount plus some other amounts. If Test 1 is greater than Test 2, the equation adds either the difference between the Test 1 and Test 2 amounts (resulting in the full Test 1 amount) or the 1.5 percent cap on baseline growth, whichever is smaller. If Test 1 is smaller than Test 2, then the equation adds zero to the Test 2 total, resulting in the Test 2 amount.

$$N_t = N2 + \min\left\{\max\left[(N1_t - N2_t), 0\right] N3_t\right\} \quad \text{(B.4)}$$

It is important to remember that this baseline amount is the hypothetical amount that K–14 education would receive in a world where the General Fund always grows faster than inflation. With this baseline in hand, one can now turn to the actual amounts guaranteed to K–14 education.

Budget for K–14 Education

The next step, determining the minimum budget for K–14 education, follows a methodology similar in many respects to the baseline. The difference is that it also allows for low-growth years through the introduction of Test 3 calculations. In a given year, one of the three tests specified in Section 8, subdivision (b) will apply. The approach used here is to calculate all three amounts and then ascertain which amount actually applies.

---

[7] See subdivision (c) of Section 8, Article XVI.

[8] Remember that this calculation is for the hypothetical baseline amount. The actual Proposition 98 guarantee in a year can exceed this cap because of Test 1.

Test 1 Amount

The budget may be represented by a linear function of the General Fund as in the Test 1 calculation above. Equation (B.5) shows the linear relationship between the General Fund and the Test 1 budget amount.

$$A1_t = aG_t + X_t \qquad \text{(B.5)}$$

Test 2 Amount

Similarly, the Test 2 budget might be last year's budget increased by enrollment growth[9] and inflation (per-capita personal income) growth (the Test 2 amount), as given in equation (B.6).

$$A2_t = B_{t-1}\left(\frac{E_t}{E_{t-1}}\right)\left(\frac{J_t}{J_{t-1}}\right) \qquad \text{(B.6)}$$

It is important to point out that B_{t-1} ,last year's state and local spending on K–14 education, in this equation represents the prior year's actual spending the budget and not the baseline. In periods of state economic prosperity, $A2_t$ is subject to the same growth constraints as $N2_t$ and therefore B_{t-1} cannot exceed N_{t-1}.

Test 3 Amount

In years of low growth for General-Fund revenue, the budget is determined by Test 3. Under one provision of this test, the budget is last year's budget increased by enrollment growth and General Fund (per-capita) growth plus one-half of one percent (the "Test 3a" amount), as described in Section (8)(b)(3). The equation is expressed mathematically in (B.7). Note that B_{t-1} in the equations in this section represents the actual spending, the budget, from the prior year.

$$A3a_t = B_{t-1}\left(\frac{E_t}{E_{t-1}}\right)\left[\left(\frac{H_t}{H_{t-1}}\right) + 0.005\right] \qquad \text{(B.7)}$$

Test 3 is further constrained by Section 41203.5 of the Education Code, which requires that K–14 education, on a per-pupil basis, do no worse than

[9]There is a constraint that, in years of declining enrollment, the enrollment adjustment cannot serve to reduce the funding amount *unless* there were also enrollment decreases in the prior *two* years. This constraint applies in both Tests 2 and 3a.

noneducation categories within the General Fund, on a per-capita basis.[10] This is "Test 3b." Another way of stating this is that this year's budget might be last year's budget increased by enrollment growth and the growth in noneducation spending from the General Fund. This is given in Equation (B.8).

$$A3b_t = B_{t-1}\left(\frac{E_t}{E_{t-1}}\right)\left(\frac{(G_t - S_t) / P_t}{(G_{t-1} - S_{t-1}) / P_{t-1}}\right) \qquad \text{(B.8)}$$

Recognizing that $S_t=B_t-X_t$ and $S_{t-1}=B_{t-1}-X_{t-1}$ in general, and that $B_t=A3b_t$ in this formula, one can solve for $A3b_t$, defining an intermediate variable, Z_t, to make the final formula more compact. This is done in equations (B.9) and (B.10). Explanation will be limited to the fact that these equations represent the algebraic solutions of Equation (B.8), solving for $A3b_t$.

$$Z_t = \left(\frac{P_{t-1}}{P_t}\right)\left(\frac{1}{G_{t-1} - B_{t-1} + X_{t-1}}\right) \qquad \text{(B.9)}$$

$$A3b_t = \frac{B_{t-1}\left(\frac{E_t}{E_{t-1}}\right)Z_t(G_t + X_t)}{1 + Z_t B_{t-1}\left(\frac{E_t}{E_{t-1}}\right)} \qquad \text{(B.10)}$$

The final Test 3 amount is equal to the greater of $A3a_t$ or $A3b_t$, as long as it does not exceed $A2_t$. In equation form, one gets Equation (B.11).

$$A3_t = \min\left[\max(A3a_t, A3b_t), A2_t\right] \qquad \text{(B.11)}$$

Moreover, if one is in a Test 3 world, then the budget is below the baseline. The difference between the two is called the maintenance factor. Since the model keeps the baseline from year-to-year, the difference between the baseline and the budget is always the maintenance factor. A final footnote in the description of these tests is the role of maintenance factors.

Maintenance Factors

Maintenance factors serve to keep a running record of the status of K–14 education under Proposition 98 (the baseline) and its status after the addition of the low-growth provisions included in Proposition 111 (the budget). In years in

[10] Since we are assuming that community college budgets and enrollments will move similarly to K-12, we can execute this test using only K-12 numbers.

which the General Fund grows faster than inflation, a portion of this shortfall (the maintenance factor) is restored to the minimum K–14 education budget until it is restored to baseline levels of funding. This restoration takes place in any year in which the per-capita General Fund outgrows inflation (per-capita personal income) and a maintenance factor exists ($A2_t<N2_t$). In these years, the amount is equal to one-half of the difference in growth rates between the per-capita General Fund and inflation times the General Fund is required to be allocated to K–14 education in addition to the Test 1 or Test 2 amount. Equation (B.12) described this relationship mathematically, where R_t is the amount to be restored to the budget in year t.

$$R_t = \max\left[\min\left\{0.5\left(\left(\frac{H_t}{H_{t-1}}\right) - \left(\frac{J_t}{J_{t-1}}\right)\right)G_t,\ N2_t - A2_t\right\},0\right] \qquad \text{(B.12)}$$

All of the tests and their related pieces have now been covered and we can now see how they interact in a given year.

Selecting the Correct Budget Amount

From the preceding part of the analysis, three amounts have been determined, one from each test $A1_t$, $A2_t$, and $A3_t$. Which of these possibilities actually happens in a given year is governed by the following logic. The test that determines which equation to use compares growth in the General Fund per capita with growth in personal income per capita. If the General-Fund growth is large by this test, then the budget equals the larger of amount $A1_t$ versus amount $A2_t$ plus the restoration R_t. If the General-Fund growth is small by this test, then the budget equals the amount $A3_t$, represented in equations (B.13) through (B.15).

$$\text{If} \quad \left(\frac{H_t}{H_{t-1}}\right) > \left(\frac{J_t}{J_{t-1}}\right) - .0005 \qquad \text{(B.13)}$$

$$\text{Then} \quad B_t = \max(A1_t, A2_t + R_t) \qquad \text{(B.14)}$$

$$\text{Else} \quad B_t = A3_t \qquad \text{(B.15)}$$

One of the crucial aspects of California's K–14 finance structure is that it is dynamic—that is to say, each year is dependent on what happens in the prior year. This circumstance means that changes in any given year, such as those associated with the voucher initiative, can have effects on the baseline and budget numbers across all succeeding years. Therefore, it is necessary to develop

a full dynamic simulation model, as done here, to assess the prospects for K–14 education under different scenarios.

Property Tax as Input to the Model

Proposition 98 guarantees that the sum of General-Fund expenditure on K–14 education and property taxes allocated to K–14 education be at least as large as a calculated minimum amount. Consequently, we require a projection of property taxes as an input to the analysis that will determine the required General-Fund expenditure. Table B.1 presents the property tax projections. Our assumptions for the growth in local property taxes are that nominal annual growth rates will remain at their current low levels for a couple of years due to lags in recovery from the recession. Then, beginning in the mid-1990s, the nominal annual growth rates will be higher but still considerably lower than they were in the 1980s. The allocation of total property taxes to K–14 education and the other categories was done using the 1993–1994 distribution.[11]

[11]See the notes to Table B.1 for the specific assumptions used in projecting property taxes. They are the same as those made in the analysis for Shires et al. (1994).

Table B.1

Property Tax Revenue ($ Millions), California, 1994–2005

Fiscal Year	K-14	Cities and Counties	Special Districts	Total
1993-94	9,666	6,052	3,368	19,086
1994-95	9,956	6,234	3,469	19,659
1995-96	10,305	6,452	3,591	20,347
1996-97	10,717	6,710	3,734	21,161
1997-98	11,253	7,045	3,921	22,219
1998-99	11,928	7,468	4,156	23,552
1999-00	12,643	7,916	4,405	24,965
2000-01	13,529	8,470	4,714	26,713
2001-02	14,476	9,063	5,044	28,583
2002-03	15,489	9,698	5,397	30,583
2003-04	16,573	10,376	5,775	32,724
2004-05	17,899	11,207	6,237	35,342

SOURCES:

(a) Total projected using growth rate assumptions: 3% for 1995, 3.5% for 1996, 4% for 1997, 5% for 1998, 6% for 1999 and 2000, 7% for 2001 to 2004, and 8% for 2005.

(b) Distribution projected using the 1994 distribution: 50.6% K-14, 31.7% cities and counties, and 17.7% special districts.

Table B.2 assembles the inputs to the Proposition 98 model. Table B.3 presents the output: the minimum permissible expenditure on K–14 from the General Fund. Adding the federal funds, state special funds, and other local revenues to General Funds and property taxes yields the projected total expenditure on K–14 education (see Table B.4). Tables B.5 and B.6 then apply price index and population deflators to reveal trends in real expenditure and real expenditure per capita. During the 1994 to 2005 projection period, both real per-capita total expenditure and real per-capita General-Fund expenditure on K–14 education are projected to increase slightly.

Table B.2

Inputs into Proposition 98/111 Model

	K-12 ADA Enroll-ments (thousands) "E"	Personal Income ($ millions) "I"	General-Fund SAL Revenues ($ millions) "G"	K-14 Property Taxes ($ millions) "X"	Total Population (millions) "P"
1987-88	4,395	496,500	32,500	4,360	27.717
1988-89	4,518	533,600	35,900	4,724	28.393
1989-90	4,681	574,600	37,500	5,192	29.142
1990-91	4,860	619,400	37,000	5,749	29.976
1991-92	5,016	631,700	40,800	6,168	30.646
1992-93	5,102	656,600	39,500	7,709	31.300
1993-94	5,166	683,000	38,900	9,666	31.906
1994-95	5,245	715,000	41,200	9,956	32.520
1995-96	5,382	752,000	43,600	10,305	33.189
1996-97	5,526	793,000	46,400	10,717	33.864
1997-98	5,662	836,000	49,200	11,253	34.524
1998-99	5,784	882,000	51,800	11,928	35.183
1999-00	5,909	928,000	54,700	12,643	35.824
2000-01	6,041	976,000	57,500	13,529	36.444
2001-02	6,180	1,026,000	60,300	14,476	37.056
2002-03	6,329	1,076,000	63,200	15,489	37.666
2003-04	6,489	1,128,000	66,100	16,573	38.252
2004-05	6,638	1,182,000	69,200	17,899	38.838

SOURCES:

(a) K–12 average daily attendance (ADA): history from California's Office of the Legislative Analyst, projections from the Department of Finance.

(b) Personal Income from Tables 2.4 and 2.10.

(c) The "State Appropriations Limit (SAL)" portion of the General Fund, defined by Propostion 98, is the "General Fund" input to the Proposition 98 formulas. The 1994–1995 estimate that SAL is 97.2% of the General Fund is typical of past years, and it is applied to the General Fund projections in Table 2.19 to obtain the SAL projections presented here.

(d) Property taxes from Tables 5.1 and B.1

(e) California's total population from Table 2.19.

Table B.3

General-Fund Expenditure on K–14 Education Under Proposition 98/111 ($ Millions)

Fiscal Year	Prop. 98 Minimum Spending	Non-Prop. 98 Spending	Total
1987-88	13,310	1,759	15,069
1988-89	14,630	1,022	15,652
1989-90	15,880	718	16,598
1990-91	15,460	721	16,181
1991-92	17,480	830	18,310
1992-93	16,410	1,242	17,652
1993-94	14,020	1,523	15,543
1994-95	14,650	1,770	16,420
1995-96	15,140	2,270	17,410
1996-97	16,470	2,090	18,560
1997-98	17,740	2,220	19,960
1998-99	18,710	2,340	21,050
1999-00	19,800	2,470	22,270
2000-01	20,760	2,590	23,350
2001-02	21,770	2,720	24,490
2002-03	22,820	2,850	25,670
2003-04	23,960	2,980	26,940
2004-05	24,900	3,120	28,020

NOTE: "Proposition 98 minimum spending" estimated by the model using the inputs in Table B.2. This comes from the General Fund. "Non-Proposition 98 spending from the General Fund" includes debt service and retirement costs, estimated as 4.4% of general fund revenue (the average of the 1994 to 1996 estimates in the Governor's Budget Summary 1995–1996).

Table B.4

Total Expenditure on K–14 Education Under Proposition 98/111 by Source of Funding ($ Millions), California, 1994–2005

Fiscal Year	General Fund	Property Taxes	Federal Funds	Special State Funds	Other Local Revenue	Total
1993-94	15,543	9,666	2,283	39	2,778	30,309
1994-95	16,420	9,956	2,388	41	2,908	31,712
1995-96	17,410	10,305	2,523	43	3,071	33,352
1996-97	18,560	10,717	2,669	45	3,248	35,238
1997-98	19,960	11,253	2,816	48	3,427	37,504
1998-99	21,050	11,928	2,963	50	3,606	39,597
1999-00	22,270	12,643	3,118	53	3,794	41,879
2000-01	23,350	13,529	3,283	56	3,996	44,213
2001-02	24,490	14,476	3,460	59	4,210	46,694
2002-03	25,670	15,489	3,649	62	4,440	49,310
2003-04	26,940	16,573	3,854	65	4,688	52,120
2004-05	28,020	17,899	4,061	69	4,939	54,988

SOURCES:

(a) General Fund from Table B.3.

(b) Property taxes from Table B.1.

(c) Federal funds, special funds, and other local revenue projected, assuming that real amounts per K–12 and per CC student are constant at their 1993–1994 levels; see Table B.2 for the student counts.

Table B.5

Total Expenditures on K-14 Education Under Propostion 98/111, California, 1994–2005

Fiscal Year	Nominal ($ millions)	Real 1994 $ ($ millions)	Real 1994 $ Per Capita
1993-94	30,309	30,309	950
1994-95	31,712	30,788	947
1995-96	33,352	31,438	947
1996-97	35,238	32,248	952
1997-98	37,504	33,322	965
1998-99	39,597	34,157	971
1999-00	41,879	35,073	979
2000-01	44,213	35,949	986
2001-02	46,694	36,861	995
2002-03	49,310	37,792	1,003
2003-04	52,120	38,782	1,014
2004-05	54,988	39,724	1,023

SOURCES: Tables B.4 and 2.19.

Table B.6

General-Fund Expenditures on K-14 Education Under Proposition 98/111, California, 1994–2005

Fiscal Year	Nominal ($ millions)	Real 1994 $ ($ millions)	Real 1994 $ Per Capita	% of General Fund
1993-94	15,543	15,543	487	38.8
1994-95	16,420	15,942	490	38.5
1995-96	17,410	16,411	494	38.8
1996-97	18,560	16,985	502	38.9
1997-98	19,960	17,734	514	39.4
1998-99	21,050	18,158	516	39.5
1999-00	22,270	18,651	521	39.6
2000-01	23,350	18,986	521	39.5
2001-02	24,490	19,333	522	39.5
2002-03	25,670	19,674	522	39.5
2003-04	26,940	20,046	524	39.6
2004-05	28,020	20,242	521	39.4

SOURCES: Tables B.4 and 2.19.

References

California Business–Higher Education Forum, *California Fiscal Reform: A Plan for Action*, Oakland, Calif., May 1994.

California Department of Corrections, *Population Projections: 1994-1999*, Population Projections Unit, Sacramento, Calif., 1994.

California Department of Corrections, *Population Projections: 1995-2000*, Population Projections Unit, Sacramento, Calif., 1995.

California Department of Social Services (1994), *Public Assistance Facts and Figures*, Health and Welfare Agency, Sacramento, Calif., monthly, October 1982 to June 1994.

California Statistical Abstract 1994, California Department of Finance, Sacramento, Calif., 1994.

Connell, Kathleen, California State Controller, *California Economy*, Controller's Quarterly, Sacramento, Calif., July 1995.

Gold, Steven D., ed., *The Fiscal Crisis of the States*, Washington, D.C.: Georgetown University Press, 1995.

Governor's Budget Summary, 1992–1993, submitted by the Governor, State of California, to the California Legislature, 1991–1992 regular session.

Governor's Budget Summary, 1995–1996, submitted by the Governor, State of California, to the California Legislature, 1994–1995 regular session.

Greenwood, W. Peter, C. Peter Rydell, Allan F. Abrahamse, Jonathan P. Caulkins, James Chiesa, Karyn E. Model, and Stephen P. Klein, *Three Strikes and You're Out: Estimated Benefits and Costs of California's New Mandatory Sentencing Law*, Santa Monica, Calif.: RAND, MR-509-RC, 1994. (Study funded by RAND.)

HCFA Medicaid Bureau (1994), *Medicaid Statistics: Program and Financial Statistics Fiscal Year 1993*, U.S. Department of Health and Human Services, Health Care Financing Administration, HCFA Pub. No. 10129, October 1994.

Ross, Jean M. et al., *Critical Choices for California: The 1995–1996 State Budget*, Sacramento, Calif.: California Budget Project and Washington, D.C. Center on Budget and Policy Priorities, June 1995.

Shires, Michael A., *The Master Plan Revisited (Again): Prospects for Providing Access to Public Undergraduate Education in California*, Santa Monica, Calif.: RAND, MR-561-LE, 1995.

Shires, Michael A., Cathy S. Krop, C. Peter Rydell, and Stephen J. Carroll, *The Effects of the California Voucher Initiative on Public Expenditures for Education*, Santa Monica, Calif.: RAND, MR-364-LE, 1994.

Task Force on California Tax Reform and Reduction, *Building a Better California: The Tax Reform Component*, Stanford, Calif.: Hoover Institution, December 1994.

U.S. Census, 1990 Census of Population and Housing, Summary Tape File 3A, U.S. Department of Commerce Data Services, CD90-3A-07, August 1992.

MR-570-LE

ISBN 0-8330-2364-0